

**Preliminary  
Amphibian and Reptile Survey  
of the  
Ashland District,  
Custer National Forest: 1995**

A Report to:

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## ABSTRACT

A total of 32 surveys of ponds, reservoirs, springs, and rock outcrops, and 53 additional opportunistic sightings of reptiles and amphibians, were made in the Ashland District of the Custer National Forest during 19 field days between late May and late September, 1995. All surveys were performed by one individual. Each survey took 5-50 minutes (mean = 24 minutes). For aquatic sites, each survey consisted of a thorough search of the wetland perimeter and netting of near shore aquatic habitats for adults, eggs, larvae, and tadpoles. Stream (spring outflow) sampling was done by hand and dipnet. Seeps and springs were checked by rolling over rocks and logs in and near wet areas. Rock outcrops were traversed on foot, with periodic searches under rocks and downed debris (e.g., logs) for lizards and snakes. No pitfall traps were placed during this inventory. Opportunistic sightings were compiled from road kills, vocal identifications, and fortuitous encounters with live animals.

Five amphibian species (one salamander, two toads, two frogs) have been reported from the Ashland District area: Tiger Salamander (*Ambystoma tigrinum*), Great Plains Toad (*Bufo cognatus*), Woodhouse's Toad (*Bufo woodhousii*), Western Chorus Frog (*Pseudacris triseriata*), and Northern Leopard Frog (*Rana pipiens*). All but the Great Plains Toad were detected in 1995. The Tiger Salamander and Northern Chorus Frog were the most widespread amphibians throughout the District in 1995. Northern Leopard Frogs are nearly extirpated from western Montana, and anecdotal evidence indicates a decline elsewhere in the state, but the species remains relatively common in southeastern Montana. The Woodhouse's Toad was encountered at several sites on the District and also appeared to be relatively common in 1995. The status of the Great Plains Toad on the Ashland District remains questionable; only two records exist from the area, neither being on U.S. Forest Service lands.

Nine reptile species (three turtles, one lizard, five snakes) have been reported from on or near the Ashland District: Painted Turtle (*Chrysemys picta*), Snapping Turtle (*Chelydra serpentina*), Spiny Softshell (*Trionyx spiniferus*), Sagebrush Lizard (*Sceloporus graciosus*), Racer (*Coluber constrictor*), Gopher Snake (*Pituophis catenifer*), Western Terrestrial Garter Snake (*Thamnophis elegans*), Plains Garter Snake (*Thamnophis radix*), and Western Rattlesnake (*Crotalus viridis*). All but the Plains Garter Snake were detected during the 1995 survey. The Painted Turtle and Racer were the most widespread species on the District in 1995, being detected on more than 15 occasions each. The remaining species were each detected fewer than six times (usually only once or twice), but it is not yet possible to determine whether the few detections of these species are a result of actual relative scarcity or were artifacts of the sampling methodology. The following have been recorded in southeastern Montana and may eventually be found on Ashland District lands: Plains Spadefoot (*Scaphiopus bombifrons*), Bullfrog (*Rana catesbeiana*), Short-horned Lizard (*Phrynosoma douglasi*), Western Hognose Snake (*Heterodon nasicus*), Milk Snake (*Lampropeltis triangulum*), and Common Garter Snake (*Thamnophis sirtalis*).

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Museum records were received from: American Museum of Natural History, Academy of Natural Sciences at Philadelphia, Brigham Young University, California Academy of Science, Carnegie Museum of Natural History, University of Puget Sound Museum, Field Museum of Natural History, Glacier National Park Museum, Illinois Natural History Survey, University of Kansas Museum of Natural History, Los Angeles County Museum, Louisiana State University Museum of Zoology, Museum of Comparative Zoology - Harvard, Milwaukee Public Museum, Montana State University Museum, Michigan State University Museum, North Carolina State Museum of Natural History, Northern Louisiana University Museum, University of Colorado Museum, University of Georgia Museum of Natural History, University of Idaho Museum, University of Michigan Museum of Zoology, University of South Dakota, United States National Museum of Natural History, University of Texas - Arlington, University of Texas - El Paso, and Peabody Museum - Yale. Most museum data were received with the help of Dr. Charles Peterson, Idaho State University, Pocatello.

## INTRODUCTION

Many amphibians are apparently declining in the western U.S. and world-wide (Corn and Fogelman 1984, Phillips 1990, Yoffe 1992). Acid rain, ozone depletion, pollution by toxic chemicals and heavy metals, predation and/or competition by exotic species, habitat alteration, climatic changes, disease, immune system problems, and combinations of several of these factors have all been suggested as possible causes (Corn and Fogelman 1984, Phillips 1990, Yoffe 1992).

Past forestry practices and large-scale logging continue to be detrimental to resident herpetofauna in some regions of the western United States (Bury *et al.* 1991). Preliminary data indicate that the Northern Leopard Frog (*Rana pipiens*) has disappeared over much of its former range in western Montana and is declining in at least some areas of eastern Montana. Apparent declines of the Western Toad (*Bufo boreas*) have recently been reported in northern Idaho (C. Peterson pers. comm.), northwestern Montana (Werner and Reichel 1994), Yellowstone National Park (Peterson *et al.* 1992), Wyoming, and Colorado (Carey 1993). Heavy grazing in and around breeding waters may also negatively impact amphibians and reptiles living in riparian areas by: 1) eliminating emergent vegetation necessary for egg and larvae survival; 2) lowering water quality, especially causing high siltation levels; and 3) soil compaction and trampling of turtle eggs. Additionally improving seeps and springs for livestock watering may make them unavailable to breeding amphibians.

The U.S. Fish and Wildlife Service previously listed two Montana amphibians and two reptiles as Category 2 candidate species: Spotted Frog (*Rana pretiosa*), Tailed Frog (*Ascaphus truei*), Short-horned Lizard (*Phrynosoma douglasi brevirostra*) and Northern Sagebrush Lizard (*Sceloporus graciosus graciosus*). The U.S. Forest Service Region 1 lists the Coeur d'Alene Salamander (*Plethodon idahoensis*) as "Sensitive" and is considering adding several other amphibians. The Montana Natural Heritage Program and the Montana Department of Fish, Wildlife and Parks list six amphibians [Coeur d'Alene Salamander, Idaho Giant Salamander (*Dicamptodon aterrimus*), Tailed Frog, Canadian Toad (*Bufo hemiophrys*), Spotted Frog, and Wood Frog (*Rana sylvatica*)] and 7 reptiles [Snapping Turtle (*Chelydra serpentina*), Spiny Softshell (*Apalone spinifera*), Short-horned Lizard, Sagebrush Lizard, Western Hognose Snake (*Heterodon nasicus*), Smooth Green Snake (*Opheodrys vernalis*), and Milk Snake (*Lampropeltis triangulum*)] as Animal Species of Special Concern in the state. The Northern Leopard Frog and Western Toad (*Bufo boreas*) are being considered for addition to the list. Seven of these listed species (Northern Leopard Frog, Snapping Turtle, Spiny Softshell, Short-horned Lizard, Sagebrush Lizard, Western Hognose Snake, and Milk Snake) occur, or potentially occur, on the Ashland District.

## METHODS AND MATERIALS

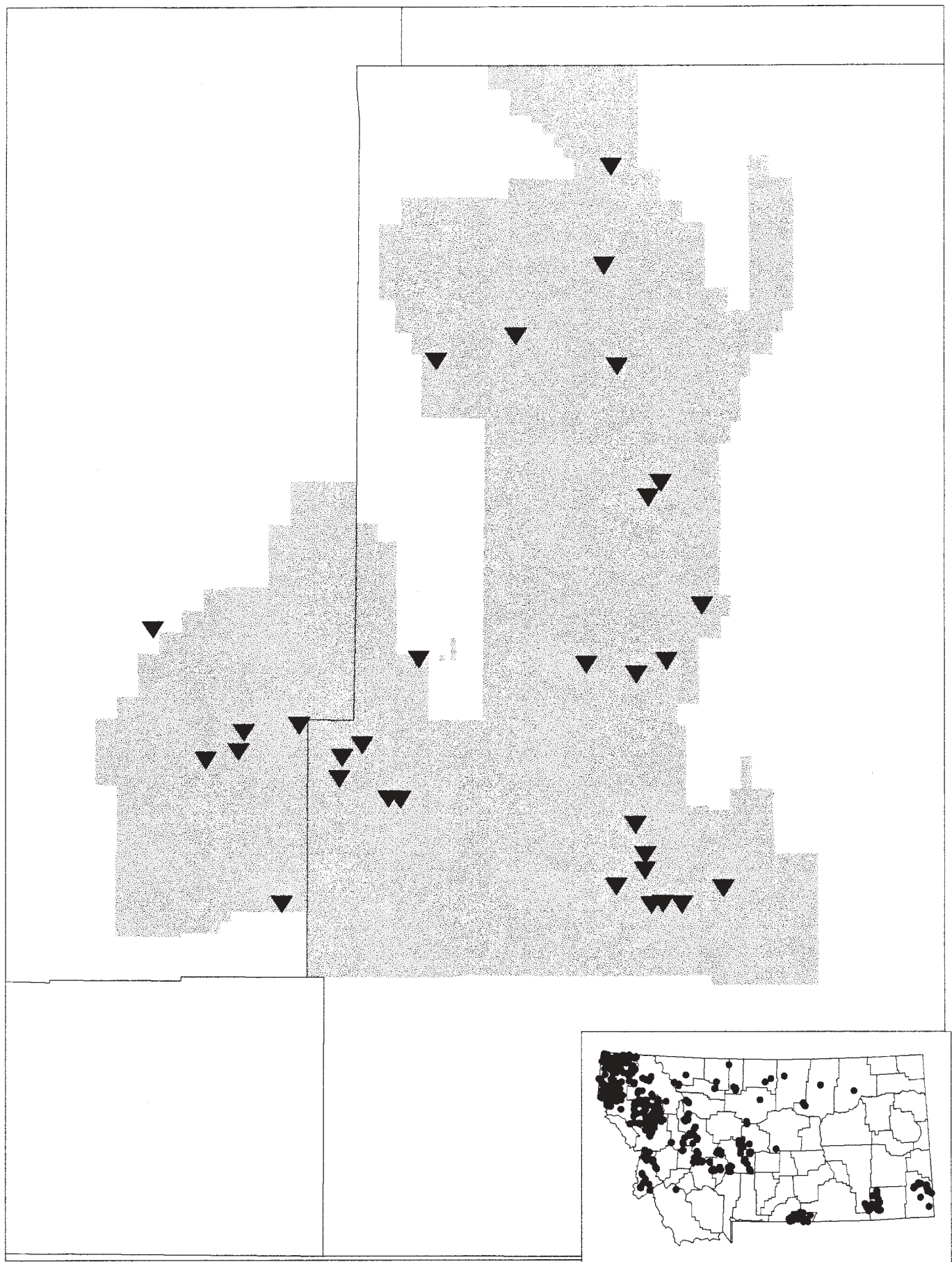
Historical locations of amphibians and reptiles were recorded from the literature (see Bibliography) and museum specimen records. Records were received from over 20 major museums in North America. Location and other information was then entered into a database and digitized.

Survey sites in 1995 were chosen based on three criteria: 1) Cliffs and rock outcrops of reasonable accessibility; 2) Location of streams, seeps and wetlands on topographic maps; and 3) accessibility of the wetlands by roads or hiking trails. Wetlands had priority over other types of sites. Based on the above, 1-6 sites were chosen daily for surveys. Five to 50 minutes (mean = 24 minutes) were spent at each site, depending upon the size of the area and what was found. Initially for water bodies and springs, the entire shoreline, or a major part thereof, was searched by walking slowly along the edge and up into the surrounding vegetation, including rolling over rocks and logs. At regular intervals, the aquatic habitat was sampled for tadpoles or larvae using dipnets. If the initial sampling showed amphibian/reptile species present, further effort was expended in order to get some idea of abundance and distribution. Rock outcrops were traversed while turning over potential cover (rocks and logs) under which lizards or snakes might be hiding.

An attempt was made to capture at least the first few individuals of a species seen at a survey site. The species name was recorded along with developmental stage and sex (if possible); the animals were then released. Representative samples of the more common species in an area were preserved for permanent museum records and are deposited at the Idaho State University Museum. Water temperature, air temperature, and a general description of the area were recorded. Standard data sheets used during this project are given in Appendix 1; the amphibian survey data sheet was developed by U.S. Fish and Wildlife Service and is used extensively by a variety of researchers in the western U.S. Much site-specific data was gathered during these surveys; not all data have been analyzed or presented in this report, but are available from the Montana Natural Heritage Program.



# Herp Surveys on or near the Ashland Ranger District, Montana



Survey locations from the Montana Natural Heritage Program, December 17, 1995

## RESULTS AND DISCUSSION

A total of 32 sites were surveyed of which 23 (71.8%) had one or more amphibian or reptile species present (Figure 1, Appendices 2 and 3). Although no species were found at nine sites, their absence may have been due to the time of day, weather conditions, or other factors at the time of sampling. With two exceptions, all of the sites were on Ashland District, Custer National Forest land.

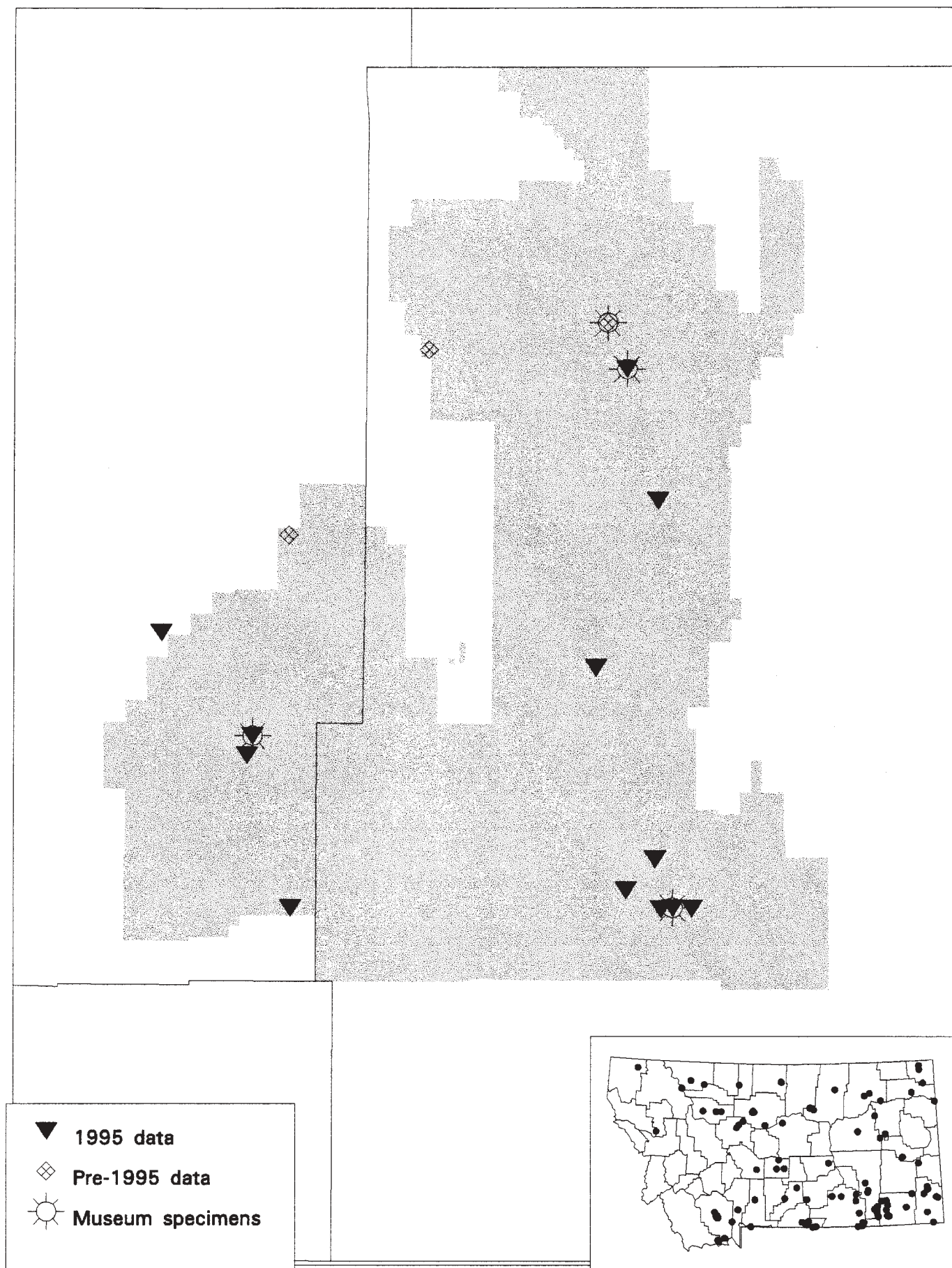
In addition to the 32 surveys, there were 53 sightings (i.e. road kills, chance observations) for which data are available. Location data from surveys, chance encounters, and historical records (from the literature and museum specimens) are listed in Appendix 4. The survey and sighting data, in addition to any historical records, were used in constructing the enclosed distribution maps; statewide inset maps for each species are based on sight and specimen records, both recent and historical. Most historical data came from two surveys, one in 1916 by the U.S. Biological Survey (specimens housed at the U.S. National Museum), and the other by the University of Kansas in 1970 (specimens housed in the University of Kansas Museum of Natural History).

Based on museum specimens, publications or reports which have recorded species in or near the Ashland District, and from personal accounts, five amphibians (Tiger Salamander, Great Plains Toad, Woodhouse's Toad, Western Chorus Frog, Northern Leopard Frog) and nine reptiles (Painted Turtle, Snapping Turtle, Spiny Softshell, Sagebrush Lizard, Racer, Gopher Snake, Western Terrestrial Garter Snake, Plains Garter Snake, Western Rattlesnake) have been reported on or near the Ashland District, Custer National Forest. An additional two amphibians (Plains Spadefoot, Bullfrog) and four reptiles (Short-horned Lizard, Western Hognose Snake, Milk Snake, Common Garter Snake) could potentially be found there. Four amphibian and eight reptile species were actually observed during the 1995 survey.

In the following species accounts, sections on "Similar Species" cover only those species which are known or suspected to occur in Montana; outside Montana, other similar species may occur but are not covered in this report. Photos of all Montana amphibians and reptiles may be found in Reichel and Flath (1995). Heritage Program Global (G) and State (S) rank codes range from 1 (critically imperiled) to 5 (demonstrably secure, though possibly rare in parts of its range). Other codes are E (exotic, though possibly native in adjacent regions). A question mark (?) indicates that the assigned rank is uncertain.

# Ambystoma tigrinum -- Tiger Salamander

## Occurrences on or near the Ashland Ranger District, Montana



## Species known to be present on or near the Ashland District, Custer National Forest

### **Tiger Salamander** (*Ambystoma tigrinum*)

**Description:** Adults have a smooth moist skin without scales and the color pattern is highly variable; usually the background color is dark, with lighter blotches of yellow, tan or green. The adult is large and heavy-bodied with a snout-vent length of 3-6".

**Eggs and Larvae:** Egg masses are typically laid in small clusters of 5-120, but may be laid singly (Nussbaum *et al.* 1983, Leonard *et al.* 1993). They are usually attached to vegetation and placed 2"-10" below the surface of the water (Hammerson 1982a). Larval Tiger Salamanders are typically pale green or brown-colored, though those living in bentonite clay ponds may be nearly white. They are found in lakes and ponds, have external gills, and are relatively large (0.75-4" snout-vent) and heavy-bodied.

**Similar species:** None in the Ashland District. Adult Tiger Salamanders have two prominent tubercles on the bottom of each hind foot which Idaho Giant Salamanders lack. Idaho Giant Salamanders also have a more marbled color pattern and a very large head.

**Habitat and Habits:** Tiger Salamanders in Montana are primarily associated with prairie or agricultural habitats in eastern Montana. On the Ashland District they are also found in wooded draws and ponderosa pine forests. They breed in ponds or reservoirs, usually those without fish present. In arid areas, they may also be found in springs, intermittent streams, and stock ponds. Larvae found in early June on the Ashland District were small, by late July many were 10-11 cm total length and some nearly transformed (although 5% were still 4-5 cm). Only one large (trampled) individual was found during September surveys; most had apparently already transformed. In Blue Lake, Madison County, Montana, eggs were laid from early June to mid-August, hatched in about 2 weeks, and metamorphosis occurred after more than a year (Micken 1968, 1971). In Colorado and Wyoming egg laying takes place from mid-March to mid-August (Hammerson 1982a, Baxter and Stone 1985). Following breeding, adults may either remain in the pond or move to upland areas and live in burrows of their own or in those of other animals. Eggs hatch in 2-5 weeks in Colorado and metamorphosis occurs after 2-24 months (Hammerson 1982a). In some locations, such as Blue Lake in Madison County, larval salamanders never transform, but breed while still retaining external gills. This condition is called neoteny, and these salamanders are often referred to as *iaxolotls* or *iwater dogs*. Neoteny may be rare on the Ashland District since almost none were found in September.

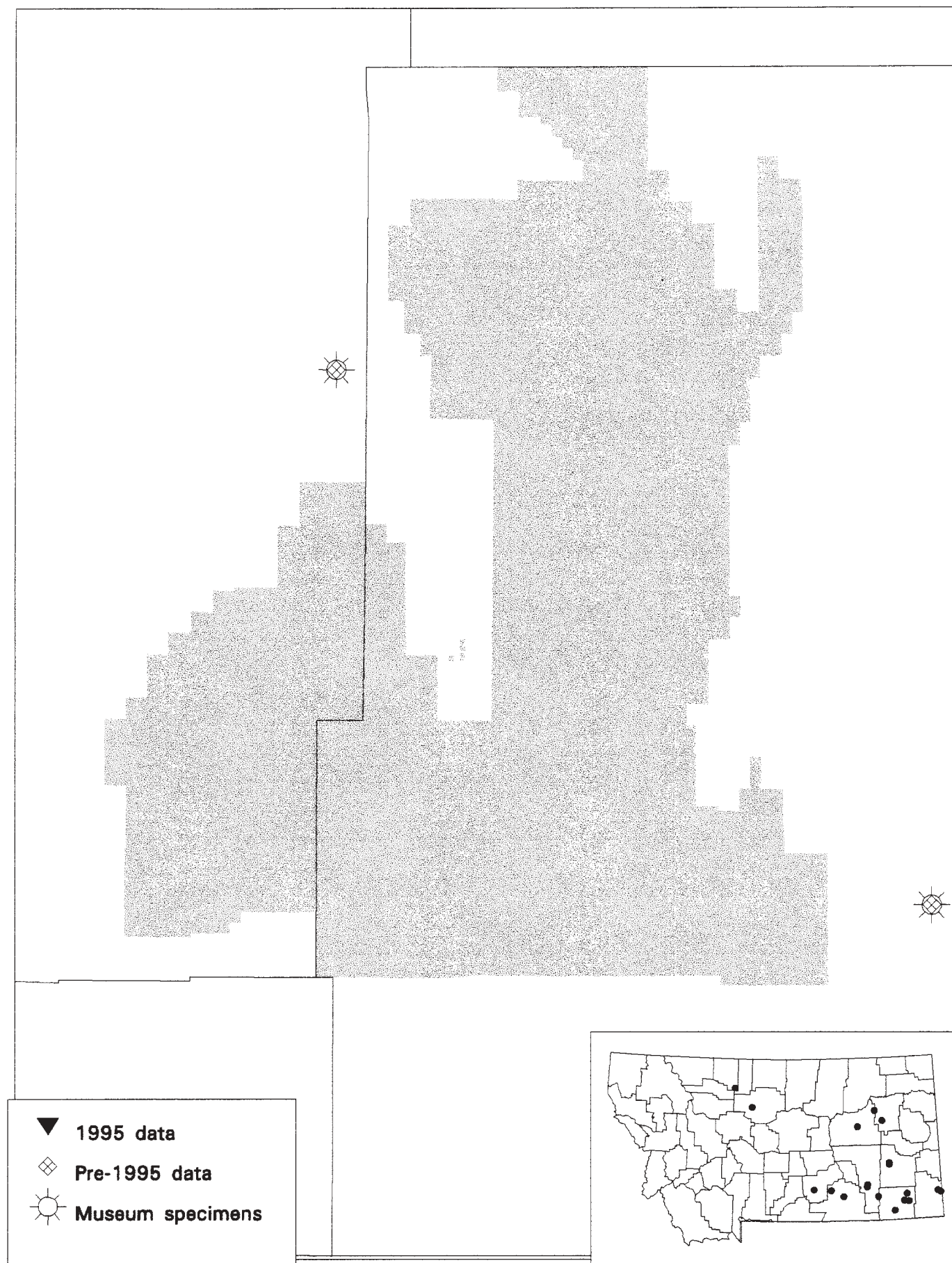
**Surveying:** Larvae and eggs may be seen in ponds during the day and may be sampled with a dipnet. Migrations of hundreds or thousands of newly transformed adults are occasionally seen in mid-late summer or early fall. During the breeding season, adults are often seen moving to or away from the water or breeding in it. Pitfall and minnow traps may be used at this time to capture adults. Pitfall traps or driving roads on warm rainy nights may be the best techniques to detect adults after breeding is completed.

**Status:** The most common salamander in eastern Montana. They are known from throughout the Ashland District and should be considered common.

Montana Natural Heritage Program rank: G5 S5.



**Bufo cognatus -- Great Plains Toad**  
**Occurrences on or near the Ashland Ranger District, Montana**



### **Great Plains Toad (*Bufo cognatus*)**

**Description:** Adults have dry skin with small warts. The coloration is dominated by a number of large, dark, somewhat symmetrical spots surrounded by light edges on the back. The dorsal background color is gray, light brown or olive green. The Great Plains Toad has converging v-shaped cranial crests between the eyes and post-orbital crests connecting to them at a right angle behind the eyes; the post-orbital crests typically touch the parotoid glands. The pupils are horizontal. The adult has two black tubercles on the hind feet and a body length of 2-3.5".

*Eggs and Tadpoles:* Similar to the Western Toad.

**Similar species:** Other Montana toads lack the somewhat symmetrical spotted pattern on the back.

**NOTE:** It is very difficult to distinguish among the four Montana toad species in recently transformed toadlets.

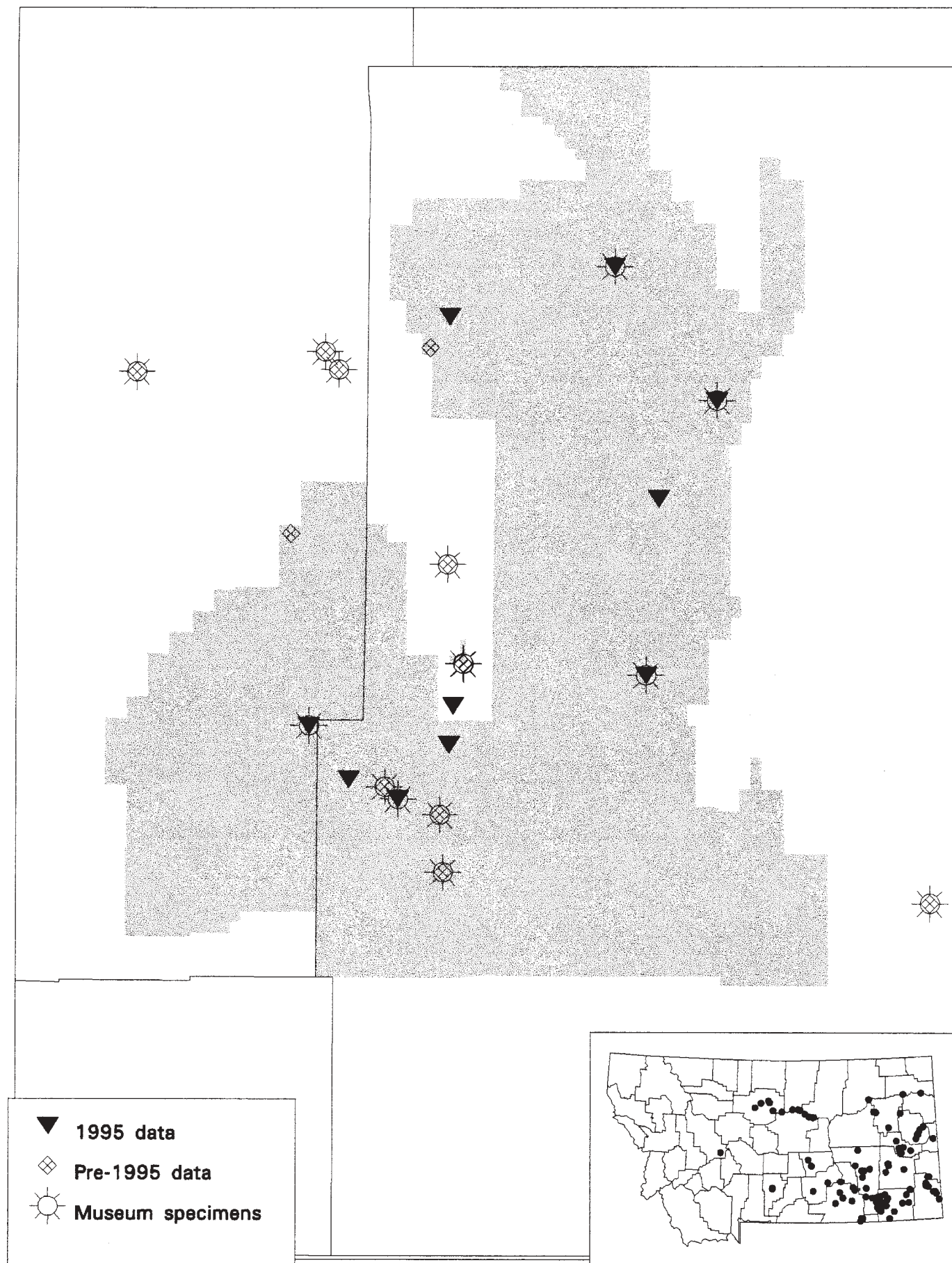
**Habitat and Habits:** Adults may favor higher elevation grasslands than Woodhouse's Toad which favors floodplains (Bragg 1940, Timkin and Dunlap 1965, Black 1970). They have also been found in agricultural areas, open Ponderosa pine forests and savannahs in southeastern Montana (Black 1970). They are most active on nights following heavy rains (Hammerson 1982a). They normally breed in temporary ponds resulting from heavy rains or irrigation runoff or reservoirs with much fluctuation (Bragg 1940, Hammerson 1982a). In Montana breeding apparently occurs from May to July (Black 1970). Females lay strings of eggs which hatch after 2-3 days (Hammerson 1982a). Young typically metamorphose after about 1.5 months, though this has been reported to occur in as few as 17 days (Hahn 1968, Hammerson 1982a). They spend much of the year underground and emerge in response to warm rains.

**Surveying:** Adults may be located by using their loud, identifying calls on warm (>60° F) nights following heavy rains (Hammerson 1982a). Road hunting on warm nights may also be effective. Eggs and tadpoles are seen in ponds during the day and can be sampled with a dipnet; however, identification of toad eggs and tadpoles is difficult or impossible in the field.

**Status:** Occurs in localized areas in eastern Montana, with large gaps in its known range. Its geographic and habitat relationships with other toads in Montana are not well known. This species was not found during the 1995 survey on the Ashland District, but historical (1916) museum records exist from the area. It should be watched for at low elevations in prairie or shrub-steppe habitat on the Ashland District. Any located on the District should be well-documented with a description written at the time indicating how this species was differentiated from other toads present in Montana.

Montana Natural Heritage Program rank: G5 S4.

**Bufo woodhousii -- Woodhouse's Toad**  
**Occurrences on or near the Ashland Ranger District, Montana**



**Woodhouse's Toad (*Bufo woodhousii*)**

**Description:** Adults have dry skin with small warts, and are gray, brown, or olive-green with paler mottling or spots. A prominent white or yellowish line runs down the center of the back; very young transformed toads typically lack the dorsal line, and the warts are often red-brown in color. It has parallel cranial crests between the eyes and post-orbital crests connecting to them at a right angle behind the eyes; the post-orbital crests typically touch the parotoid glands. If a lump-like boss is present on the snout, it does not extend back between the eyes. The pupils are horizontal. The adult has two black tubercles on the hind feet and a body length of 2.5-4".

*Eggs and Tadpoles:* Similar to the Western Toad.

**Similar species:** Western Toad lacks cranial crests. Great Plains Toad has large, white-bordered, dark, dorsal blotches. The Canadian Toad has a lump between the eyes; frequently the parotoid gland is separated from post-orbital crest and post-orbital crest broken or absent. NOTE: It is very difficult to distinguish among the four Montana toad species in recently transformed toadlets.

**Habitat and Habits:** The adults are partially terrestrial but often found near water. They are usually found in irrigated agricultural areas and floodplains, versus the upland areas used by Great Plains Toads (Bragg 1940, Timkin and Dunlap 1965, Black 1970). All individuals encountered during 1995, however, were in forested upland sites in or near water. They are most active at night, although they may at times be found out feeding during the day (Hammerson 1982a). They typically breed in permanent lakes, ponds, reservoirs, and slow streams, with a preference for shallow areas with mud bottoms (Black 1970, Hammerson 1982a, Baxter and Stone 1985). Breeding and egg laying is spread out over the spring and early summer, with known dates from Montana ranging from 4 May to 1 July (Black 1970). Transforming tadpoles and juvenile toadlets were found in late July on the Ashland District during the 1995 survey.

**Surveying:** Adults may easily be found by using their loud calls for identification on warm (>54° F) nights; calling peaks during the first few hours after sunset (Hammerson 1982a). Road hunting on warm nights may also be effective. Eggs and tadpoles are seen in ponds during the day and can be sampled with a dipnet; however, identification of toad eggs and tadpoles is difficult or impossible in the field.

**Status:** Woodhouse's Toad was encountered in ten locations during the 1995 survey on the Ashland District. Historical locations are also known from the Ashland District and southeastern Montana (Reichel 1995b). Woodhouse's Toad is relatively common in southeastern Montana; however, its status elsewhere in the state is unclear. Its geographic and habitat relationships with other toads in Montana are not well known. It should be watched for in wetland sites in forested upland and shrub-steppe habitats. Any located on the District should be well documented with a description written at the time indicating how this species was differentiated from other toads present in Montana.

Montana Natural Heritage Program rank: G5 S4.



**Pseudacris triseriata -- Western Chorus Frog**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995

**Western Chorus Frog (*Pseudacris triseriata*)**

**Description:** Adults are very small (0.75-1.5") and have tiny, almost unnoticeable toe pads. They have a dark line extending from the snout through the eye to the groin. Basic coloration is quite variable with the background color being green, brown, gray, or reddish. Typically 3-5 dark longitudinal stripes are present on the head and back which may be broken up into spots on some individuals.

**Eggs and Tadpoles:** Eggs are laid in small clusters of 10-100, usually less than 1" across and attached to submerged vegetation (Wheeler and Wheeler 1966, Baxter and Stone 1985).

Individual eggs are about 1 mm in diameter. Tadpoles are brown/bronze and the eyes are located on the sides of the head.

**Similar species:** Pacific Chorus Frogs (*Pseudacris regilla*) have obvious toe pads and an eye stripe ending at the shoulder and are not present near the Ashland District (see Reichel and Flath 1995).

Recently metamorphosed Ranid frogs could be confused with this species, but the coloration differs and the tiny toe pads are lacking.

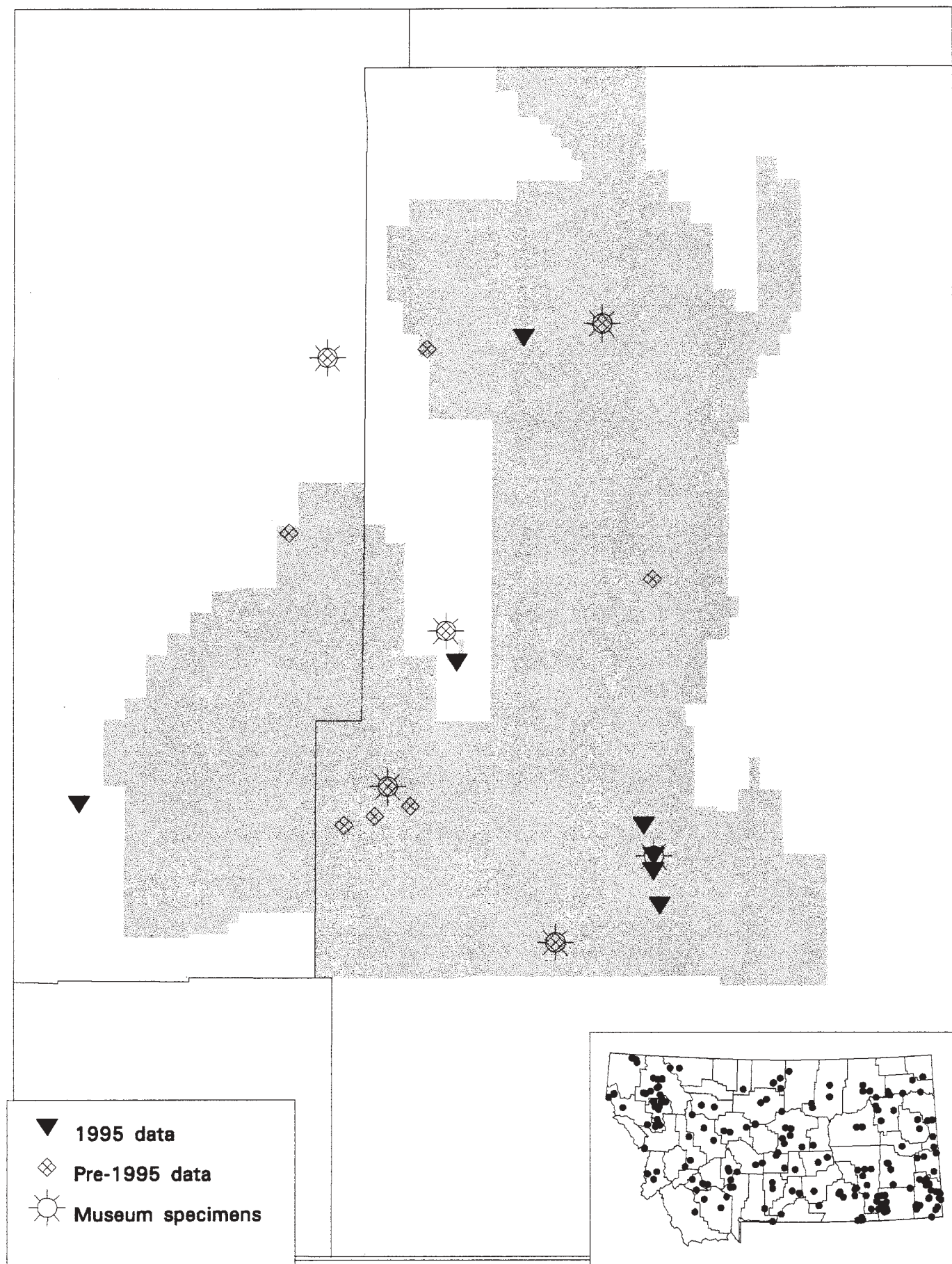
**Habitat and Habits:** Western Chorus Frogs are regularly found in the water only during the breeding period in spring. Their presence is obvious during this time due to their call which is given frequently at night and sporadically throughout the day. Calls were not heard after the early-June surveys in 1995 on the Ashland District, although non-calling adults were found in late-July. Following breeding, these frogs move into adjacent uplands and are rarely seen. In eastern Montana, they breed in temporary ponds and small lakes surrounded by prairie; in some locations in Montana, including the Ashland District, they are also found in open forested habitats. Small to mid-sized tadpoles were present at three sites during our early-June surveys (two cohorts were present in one pond), and all had apparently metamorphosed by the late-July surveys (Appendix 2, 3). Eggs hatch in about 2 weeks and tadpoles are about 2 months old at metamorphosis (Wheeler and Wheeler 1966, Nussbaum *et al.* 1983).

**Surveying:** Adults are easily surveyed for, using their calls for identification during the breeding season in the spring and early summer. During the breeding season, adults may also be seen in the water, but their small size and habit of freezing or diving when disturbed makes observation difficult; night surveys may be more productive. Egg masses are difficult to find. Tadpoles may be seen in ponds during the day and can be sampled with a dipnet.

**Status:** Common throughout the prairies of eastern Montana. Common and widespread on the Ashland District; they were recorded from 13 locations in 1995. Surprisingly few historical records existed from the Ashland area prior to the 1995 survey (Appendix 4).

Montana Natural Heritage Program rank: G5 S5.

**Rana pipiens -- Northern Leopard Frog**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995



### **Northern Leopard Frog (*Rana pipiens*)**

**Description:** Adults are brown or green with large, dark spots surrounded by light-colored halos on the sides and back. The dorso-lateral folds (ridges along the sides of the back) are usually lighter in color than the surrounding background. The under-side is typically white, but may be cream-colored or yellowish. The adult has a body length of 2-5". Newly transformed froglets may lack spots and are about 1" in length (Leonard *et al.* 1993).

**Eggs and Tadpoles:** Eggs are laid in 2-5" globular masses composed of hundreds to thousands of eggs (Hammerson 1982a, Nussbaum *et al.* 1983). The tadpoles are brown to dark brown on top with some metallic flecking, whereas the underside is often nearly transparent (Nussbaum *et al.* 1983). Total length of tadpoles may reach more than 3"; the eyes are located on top of the head.

**Similar species:** None, although some newly-transformed froglets may lack spots, which makes them extremely difficult to distinguish from Spotted and Wood Frogs.

**Habitat and Habits:** Northern Leopard Frogs are found in or near water in non-forested habitats.

Vegetation is typically dense, as in a cattail marsh or dense sedge-meadow. Breeding takes place in lakes, ponds (temporary and permanent), springs, and occasionally backwaters or beaver ponds in streams. Tadpoles were large and transforming to the terrestrial stage on the Ashland District by the time of the late-July surveys; adults were encountered between early June and late September in 1995. In Colorado, eggs hatch in 4-15 days and tadpoles take 8-15 weeks to metamorphose, depending on water temperature (Hammerson 1982a).

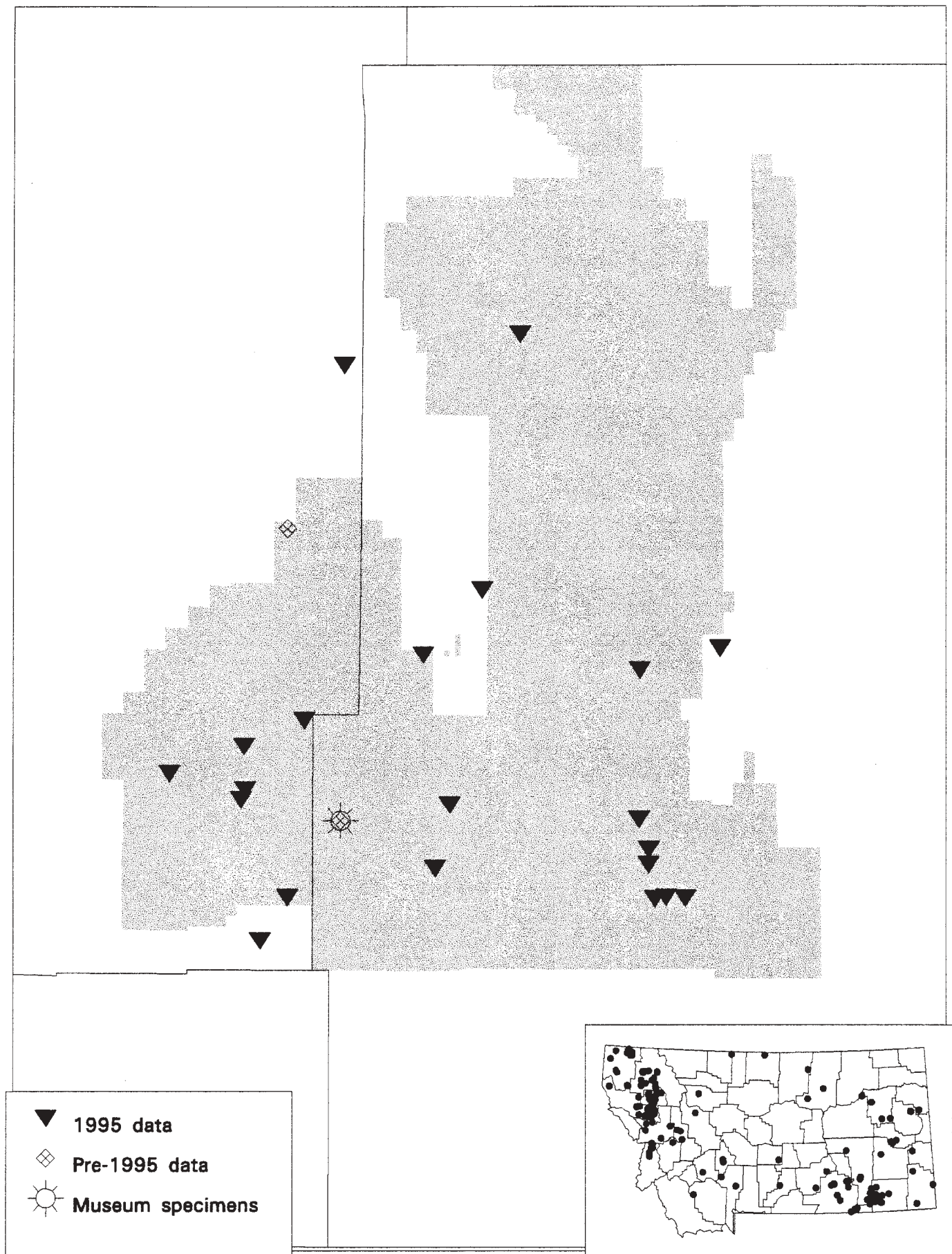
**Surveying:** Both adults, tadpoles, and eggs are easily seen in and along the water during the day and can be sampled with a dipnet; adults may also be captured by hand. At very low densities adults may be difficult to find and may be detected using tape-recorded calls. Tadpoles are difficult to tell from those of the Spotted Frog in areas where the two species overlap.

**Status:** Northern Leopard Frogs are now absent from many areas in North America where they were common a few decades ago. Widespread extinctions are known from Alberta (Koonz 1993), Wyoming, Colorado (Hammerson 1982b, Corn and Fogelman 1984), Idaho (Groves and Peterson 1992), Washington, and Oregon (Leonard *et al.* 1994). Bullfrog and fish introductions, acid rain, ozone depletion, immune system suppression, and iPostmetamorphic Death Syndrome have all been suggested as causes for frog extirpations in other areas (Corn and Fogelman 1984, Hammerson 1982b, Carey 1993, Leonard *et al.* 1993).

Historically, the Northern Leopard Frog was widespread in Montana but it now appears to be extinct throughout much of the western part of the state (Werner and Plummer 1995, Werner and Reichel 1994). Its status is uncertain in central and northeastern Montana; only localized populations are present on the western edge of the plains (Reichel 1995a). It is still abundant and widespread in southeastern Montana and northwestern South Dakota (Reichel 1995b). This species was encountered at seven locations in 1995 on the Ashland District, but breeding was confirmed at only one of these sites (Appendix 3). Whether this was an artifact of survey methodology (which seems unlikely) or very poor reproductive success, is unknown. Given its dramatic declines elsewhere in Montana and other states and provinces, breeding sites should be documented and a long-term monitoring program begun.

Montana Natural Heritage Program rank: G4 S4.

**Chrysemys picta -- Painted Turtle**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995

**Painted Turtle (*Chrysemys picta*)**

**Description:** Adult Painted Turtles have a relatively flat dorsal shell, or carapace, the length of which may reach 9" in females and 7" in males. The background color of the shell may be dark brown, olive, or black. A series of short, irregular yellow lines are often scattered across the shell, and a red and black border forms the outer edge. The ventral shell, or plastron, is red with a centrally-located yellow and black blotch with edges flaring out along the border of the scutes. The edge of the plastron also has a series of black and yellow blotches. The head, neck, and legs are marked with yellow lines, and a red spot appears behind the eye. Very dark-colored individuals are occasionally found. Males are distinguished by longer front claws and longer tails, with the anus posterior to the margin of the carapace (Ernst *et al.* 1994).

**Eggs and Young:** The elliptical, white, soft-shelled eggs are about 28-35 mm in length and 16-23 mm in width (Ernst *et al.* 1994). They typically number 6-23 per clutch. Coloration of young Painted Turtles is more vibrant and the shell is not quite as flattened as in adults.

**Similar Species:** None.

**Habitat and Habits:** Painted Turtles are active during the day and are rarely seen far from ponds, lakes, or the slow-moving water of streams. Painted Turtles observed during the 1995 survey were in ponds, reservoirs, and larger creeks. Adults are primarily herbivorous, feeding on a variety of aquatic plants, but will also scavenge on animal remains. Eggs are usually laid within 10-20 feet of the water's edge, although some individuals will travel up to 600 m in search of a suitable site. During egg-laying, the female excavates a hole with her hind feet and deposits the eggs, which are then covered by several inches of dirt. Predation on turtle eggs by raccoons, skunks, etc. is common, and shell fragments are evidence of such activity. Female Painted Turtles may lay more than one clutch of eggs each summer. Young borne of late egg depositions overwinter in the nest and do not emerge until the following spring (Ernst *et al.* 1994). Once females lay their eggs, they return to the pond, where they can often be seen basking on logs or rocks along with juveniles and males. Painted Turtles are sexually mature at 3-5 years of age and may live to be 30 years or older (Ernst *et al.* 1994).

**Surveying:** Although various turtle traps can be used for surveys, visual identification is suitable for presence/absence studies since the three turtle species in Montana are easily distinguished. Basking peaks at different times during the day, depending on season and location; in the northern states and Canada it generally peaks in the morning. Surveys should be done on sunny days with a pair of binoculars. During cold or cloudy weather, turtles tend to remain underwater for long periods and can be missed on a walk-through survey.

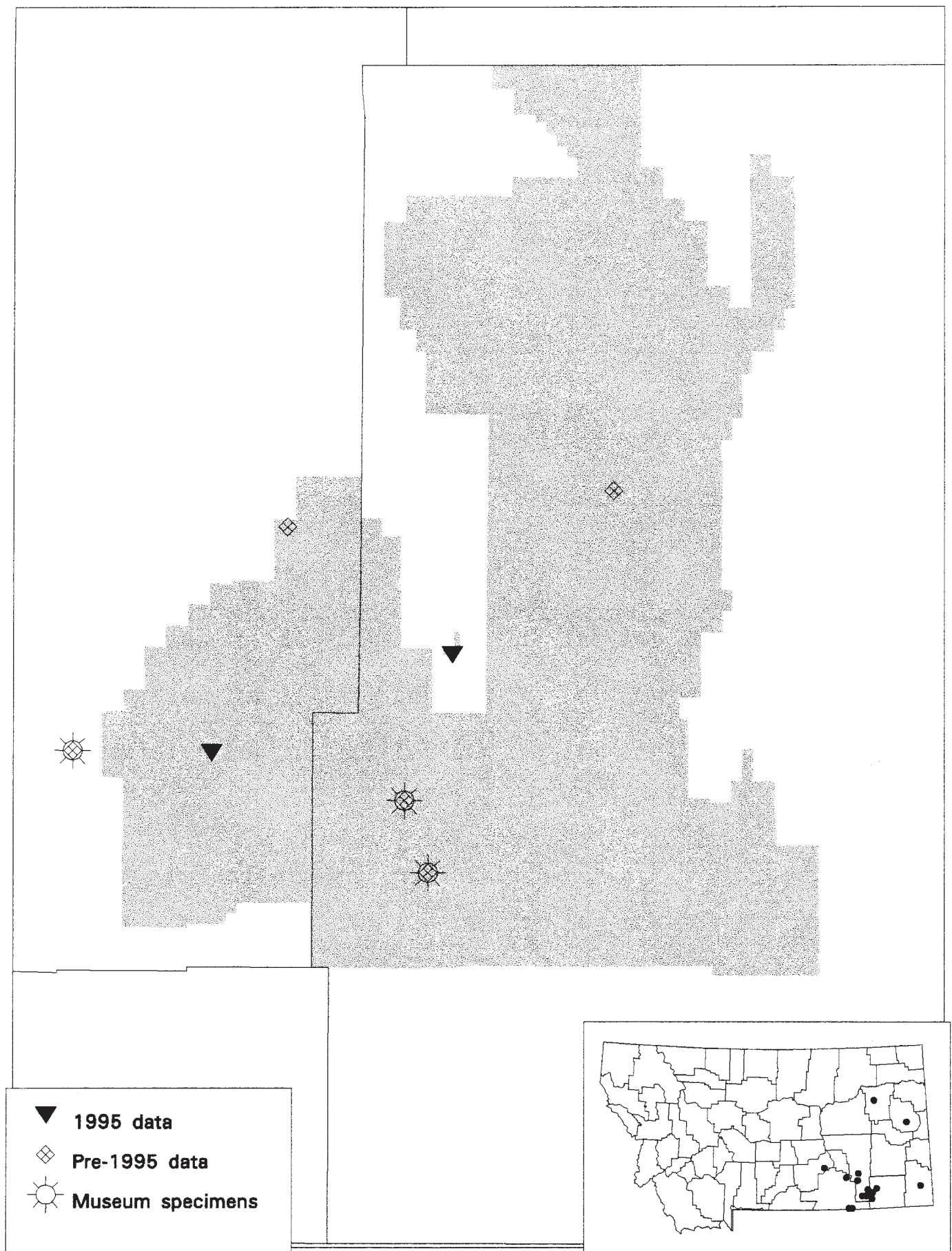
**Status:** Painted Turtles are locally quite common in Montana at lower elevations. They were located at 21 sites in the Ashland District in 1995, all after the early-June surveys. Surprisingly few historical records exist from the Ashland area prior to the 1995 survey. There has been some concern about Painted Turtle populations nationally, and whether declines have occurred in Montana is unknown. Currently, this species appears to be common and widespread on and near the Ashland District.

Montana Natural Heritage Program Rank: G5 S5.



# Chelydra serpentina -- Snapping Turtle

## Occurrences on or near the Ashland Ranger District, Montana



Species locations from the Montana Natural Heritage Program, December 17, 1995

### **Snapping Turtle (*Chelydra serpentina*)**

**Description:** The Snapping Turtle appears too large for its shell. The upper shell is olive-gray, or brown to black with the posterior edge very serrated; it has three low keels with protrusions positioned on each scute (a scale-like plate on the shell). The much-reduced lower shell is cream-colored. A long, keeled tail and warty tubercles on the head and neck are distinguishing characteristics. Males average about 10-20% larger than females, and have the anal opening posterior to the rim of the upper shell (Ernst *et al.* 1994). Most adults range from 13-30 pounds in Montana; the largest known Montana specimen was a 47-pound male (Reichel and Flath 1995).

**Eggs and Young:** The spherical, white, tough-shelled eggs are about 23-33 mm in diameter (Ernst *et al.* 1994). They typically number 20-40 per clutch (Ernst *et al.* 1994). Coloration of young turtles is similar to adults and the upper shell is 24-31 mm long.

**Similar Species:** Spiny Softshells do not have scutes on the shell. Painted Turtles are smaller and more colorful.

**Habits and Habitat:** Snapping Turtles occur in stock ponds, reservoirs, sloughs, backwaters, rivers, and irrigation ditches. They prefer waters with a soft mud or sand bottom, and much aquatic vegetation or debris (Ernst *et al.* 1994). They do occasionally move overland, but are found doing so less frequently than Painted Turtles. Food is mostly animal matter, consisting of anything that can be caught, including small birds. While it is nocturnal in southern areas, in the north it is most active in the morning and evening (Ernst *et al.* 1994). Adult females first breed at 12-19 years of age in Michigan and Ontario (Ernst *et al.* 1994). Eggs are laid in nests excavated in sandy or gravelly areas or muskrat houses in late spring or early summer. Sex is determined by the temperature of incubation (Ernst *et al.* 1994). Hibernation is in soft bottoms, under cut-banks, or among submerged roots. Snapping Turtles have a reputation for an evil temper, and are quick to bite. They can be handled safely if carried by the tail with the upper shell *away* from the captor.

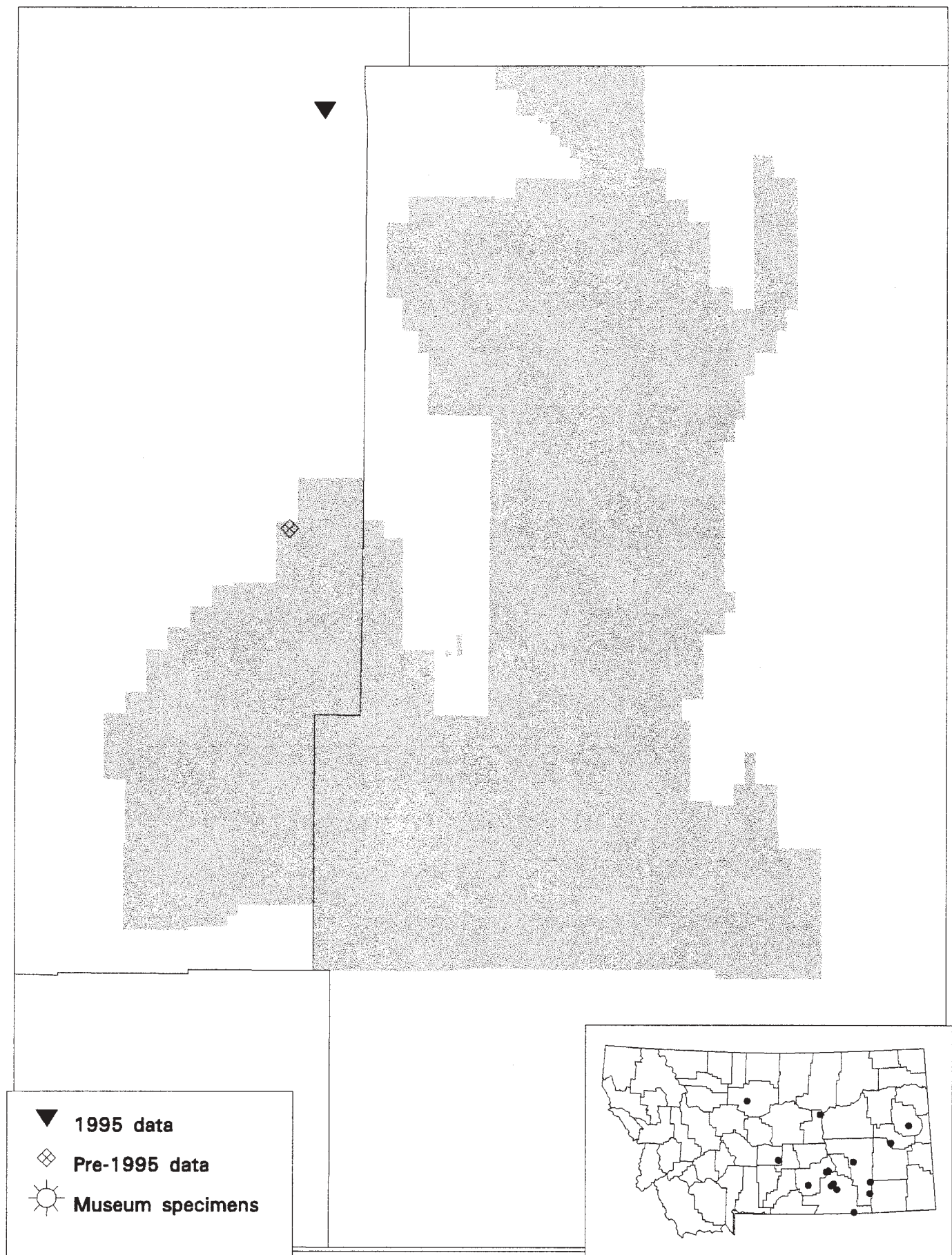
**Surveying:** Although various turtle traps can be used for surveys, visual identification is suitable for presence/absence studies since the three turtle species in Montana are easily distinguished. Surveys should be done on sunny days with a pair of binoculars. During cold or cloudy weather, turtles tend to remain underwater for long periods and can be missed on a walk-through survey.

**Status and Distribution:** Snapping Turtles occur in the Yellowstone River below Billings, the Missouri River below Ft. Benton, and all tributaries with suitable water. They also occur in water bodies that can be reached by a short trek across land. Irrigation ditches have undoubtedly aided their distribution. Records from western Montana are probably the result of translocation by humans. One adult was seen in Otter Creek in late July during the 1995 survey. The remains of an adult was found in the picnic area on Poker Jim Butte, apparently carried there from an unknown location by humans. It should be watched for, particularly in ponds and streams on the Ashland District, and any animals located should be documented.

Montana Natural Heritage Program Rank: G5 S3. A Species of Special Concern.



**Trionyx spiniferus -- Spiny Softshell**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995

### **Spiny Softshell (*Trionyx spineferus*)**

**Description:** This highly aquatic turtle has a flexible, leathery shell that looks like a flattened pancake. Adults have an olive-gray upper shell marked with dark spots, and a white or cream-colored lower shell. Shells of adults are often covered with tubercles or warts.

A flexible, pointed proboscis (snout) is also a distinguishing characteristic, and each side of the head has two separate dark-edged light stripes. Females are larger than males; adult female carapace length averages 18 inches while for males it is about 6 to 8 inches.

**Eggs and Young:** Eggs are leathery and spherical, about 30 mm in diameter, and laid in clutches of up to 30 eggs (Iverson *et al.* 1993). Eggs are laid May-August in sandy banks. Markings on young much like those of adults, only more prominent.

**Similar Species:** Snapping Turtles have serrated shells with scutes. Painted Turtles are smaller and more colorful.

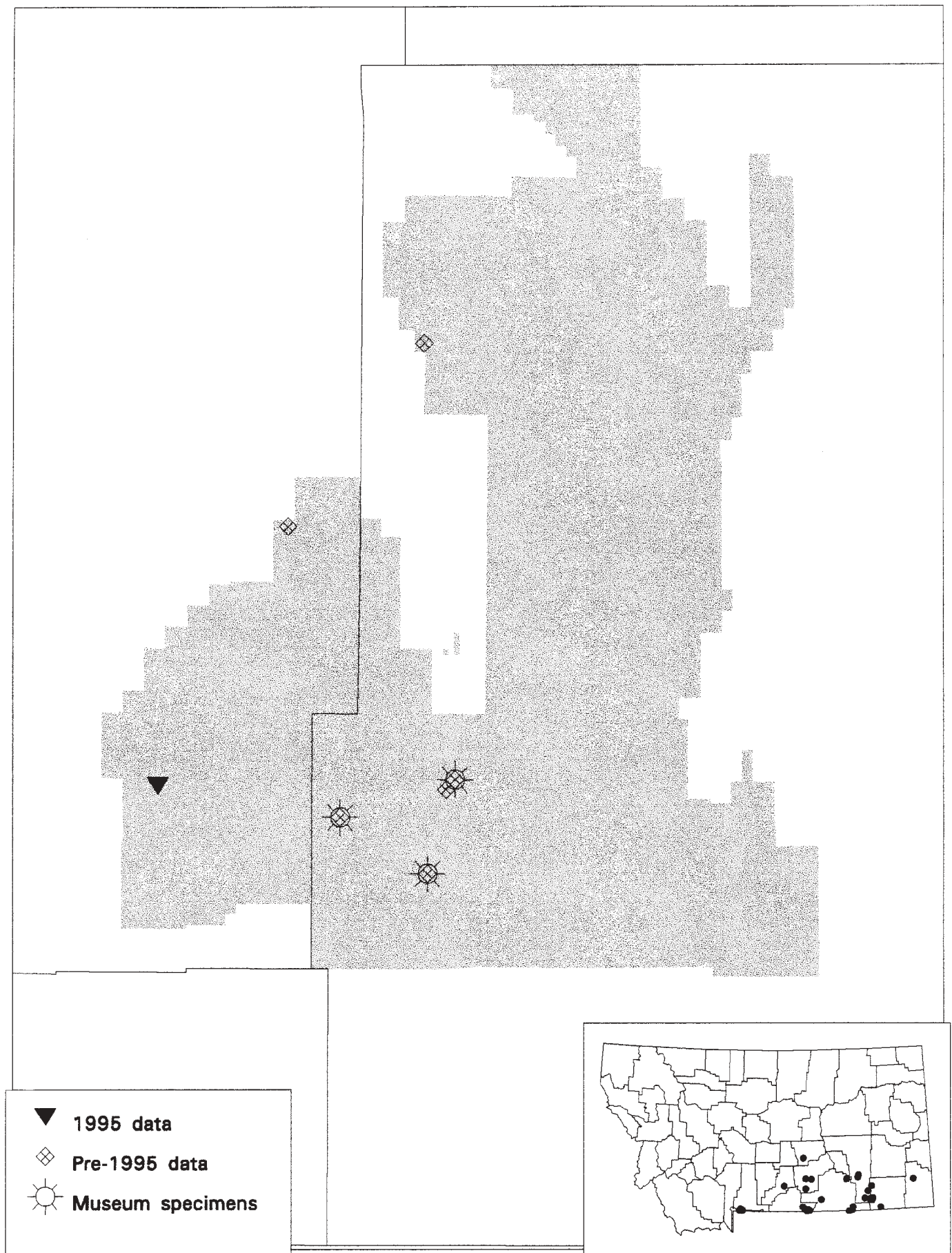
**Habits and Habitat:** Spiny Softshells are found in rivers and connecting backwaters with silty or sandy bottoms. Unlike other Montana turtles, they do not move overland from one water body to another. They use mud and sand banks and bars for both basking and nesting. Food is mostly aquatic invertebrates, earthworms, fish, frogs, and tadpoles; less commonly they eat aquatic vegetation and carrion (Ernst *et al.* 1994). When frightened, they escape by diving into the bottom mud. Spiny Softshells have a long, agile neck and can inflict a painful bite. They can be safely handled by grasping the shell on each side between front and rear legs with the head pointing away from the captor.

**Surveying:** Although various turtle traps can be used for surveys, visual identification is suitable for presence/absence studies since the three species of Montana turtles are easily distinguished. Surveys should be done on sunny days with binoculars. On cold or cloudy conditions, turtles tend to remain underwater for long periods and can be missed on a walk-through survey.

**Status and Distribution:** Spiny Softshells are found in the Yellowstone and Missouri river drainages and their major tributaries. The few records from eastern Montana probably under-represent their actual distribution and abundance in Montana. Records near Ashland are from the Tongue River, although they could occur in Otter Creek also. During the 1995 survey this species was encountered only once; a pair (male and female) was seen basking along the Tongue River near Brandenburg on 23 July. This species should be watched for and any animals located should be documented.

Montana Natural Heritage Program Rank: G5 S3. A Species of Special Concern.

**Sceloporus graciosus -- Sagebrush Lizard**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995

**Sagebrush Lizard (*Sceloporus graciosus*)**

**Description:** The Sagebrush Lizard is small (1.5 - 2.5" body length) and narrow-bodied. The color pattern in adults consists of alternating dark and light stripes running down the back. The colors are typically brown, gray, and cream. Males have mottled blue throat patches and bright blue belly patches, while females are white or yellow below (Censky 1986). The body and tail scales appear somewhat spiny.

**Eggs and Young:** There are 2-7 tough, white leathery eggs in a clutch, averaging about 7.5 X 12 mm (Nussbaum *et al.* 1983). Body length of hatchlings is about 25 mm, and coloration is similar to adults.

**Similar species:** The Western Skink has smooth, shiny scales on the body and tail; the Short-horned Lizard has a wide body.

**Habitat and Habits:** Sagebrush Lizards are found primarily in sagebrush areas, but also occur in open forests and brush lands; they are found in both areas of fine soils and rocky outcrops (Hammerson 1982a, Baxter and Stone 1985, Nussbaum *et al.* 1983). In the Yellowstone area, they are found near thermal features (Mueller 1969). They are active during the day, with peaks of activity around 10 a.m. and 4:30-5:30 p.m. (Hammerson 1982a). Females lay eggs in loose or sandy soil in early summer; the young hatch in late summer. They feed primarily on insects and other arthropods.

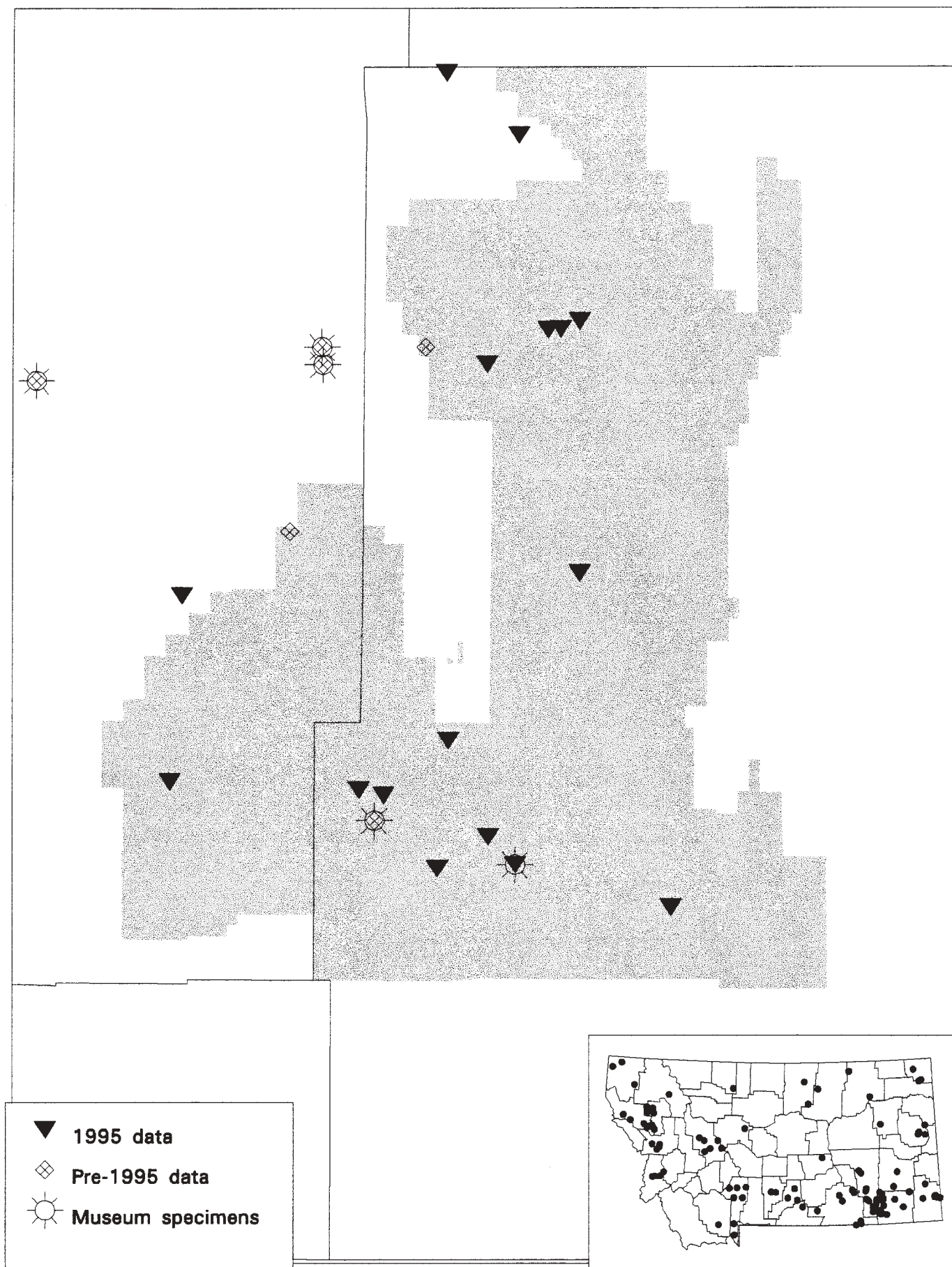
**Surveying:** They may be surveyed for by slowly walking through appropriate habitat on warm, sunny days and carefully watching for them; this technique is very effective for the Sagebrush Lizard. However, as with many lizards and snakes, they may easily be missed if conditions are not correct. Carefully-documented incidental observations provide excellent clues to their distribution. They may be captured with a pole and noose or may be also taken in pitfall or funnel traps with drift fences. Mark-recapture methods offer the best opportunity for determining population status.

**Status:** The subspecies in Montana (*S. g. graciosus*) was a U.S. Fish and Wildlife Service Category 2 Candidate species (USFWS 1994). It is locally common in southern Montana, from Yellowstone Park eastward to at least Chalk Butte in Carter County. On the Ashland District, half a dozen historical records exist, and one individual was encountered on 20 July 1995 in sandstone outcrops southwest of Poker Jim Butte. This species should be watched for on the Ashland District, and any animals located should be documented.

**Montana Natural Heritage Program Rank:** G5 S3. A Species of Special Concern.



**Coluber constrictor -- Racer**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995

**Racer (*Coluber constrictor*)**

**Description:** A slender, but moderately long snake, the Racer ranges from 20-65 inches in length. Adult coloration is uniform across the dorsal side, but it can vary from a greenish-gray to brown or blue. The ventral side is whitish to pale yellow, the latter color extending onto the upper lip scales and nasal region. The eyes are relatively large. The scales are smooth and the nostril is bordered by two scales.

**Young:** Young snakes (up to about 20") have a much different coloration than the adults, consisting of a series of dorsal brown blotches edged with black which run the length of the animal; a row of blotches is also found on each side of the animal extending onto the ventral side.

**Similar species:** Young Gopher Snakes may be distinguished by the keeled rather than smooth scales of the young Racer. Young Western Hognose Snakes have an upturned nose. Smooth Green Snakes are smaller and colored bright grass-green and whitish below; their nostrils are centered in single scales. The Rubber Boa has very small eyes and is very slow and docile.

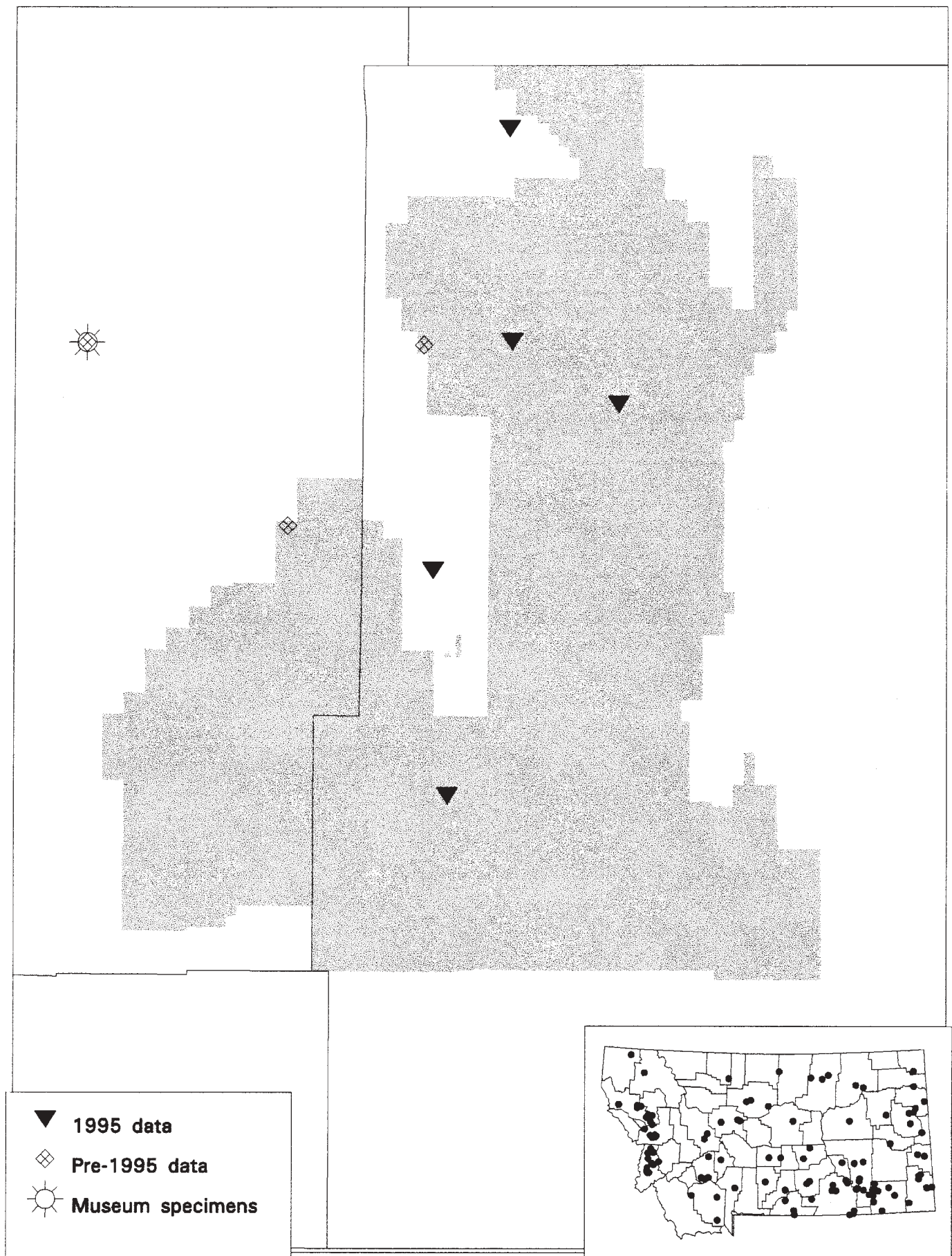
**Habitat and Habits:** The Racer is associated with more open habitats either in shortgrass, shrub-steppe, or forested areas (Hammerson 1982a, Baxter and Stone 1985). It is often found near water and rocks. The Racer is an extremely fast and agile snake. A clutch of perhaps 3-7 eggs is laid in the summer (Stebbins 1985). It preys on insects and small vertebrates such as mice and frogs. Adults were seen between 1 June and 27 September on the Ashland District. A fresh road-killed juvenile (40 cm total length) was seen on 22 July during the 1995 survey.

**Surveying:** They may be surveyed for by slowly walking through appropriate habitat on warm, sunny days and carefully watching for them; this technique is moderately effective for the Racer. However, as with many lizards and snakes, they may easily be missed. Road surveys (scanning the road surface while driving at reduced speed) are effective in determining the presence of some snakes during the warmer months. Carefully-documented incidental observations may provide the best clues to their distribution. They may be also taken in funnel traps with drift fences. Mark-recapture methods offer the best opportunity for determining population status.

**Status:** The Racer is a relatively common snake throughout much of Montana. It was seen at 16 locations in and around the Ashland District during the 1995 survey, between 1 June and 27 September. There are historical records from the Ashland area dating back to 1916. Of particular interest would be documentation of any denning sites located.

Montana Natural Heritage Program Rank: G5 S5.

**Pituophis catenifer -- Gopher Snake**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995

**Gopher Snake** (*Pituophis catenifer* [=melanoleucus])

**Description:** Montana's largest snake, the adult Gopher Snake (also called Bullsnae or Pine Snake) can reach a total length of 7 feet, but most specimens seen in western Montana range from 3-5 feet. It is readily recognized by a series of large black to brown blotches which run down the back, and another series along the sides. The blotches, which are set on a yellow background, become more widely spaced and darker towards the tail. The dorsal scales are keeled. There is usually a black band on the head located in front of and extending below the eyes. The ventral coloration is yellow to white, often spotted with black, and the anal plate is undivided.

*Eggs and Young:* Gopher Snakes lay between 2-24 eggs during the summer months (Hammerson 1982a), and the young resemble the adults in coloration.

**Similar species:** Young Racers have a black border on dark blotches and the scales are not keeled.

Young Western Hognose Snakes have an upturned nose. Western Rattlesnakes have a rattle on their tail and triangular-shaped heads.

**Habitat and Habits:** Gopher Snakes are associated with arid habitats, including grassland, shrub-steppe, and open pine forest. They feed on rodents, rabbits, ground-dwelling birds, and to a lesser extent on frogs and toads found around stock ponds and other wetlands. They have a habit of hissing and vibrating the tail when alarmed, often sounding like rattlesnakes. They occasionally climb trees, hence the common name "Pine Snake." During the 1995 survey on the Ashland District, adults were encountered between 24 May and 4 June; a fresh road-killed juvenile (31 cm total length) was found on 28 September.

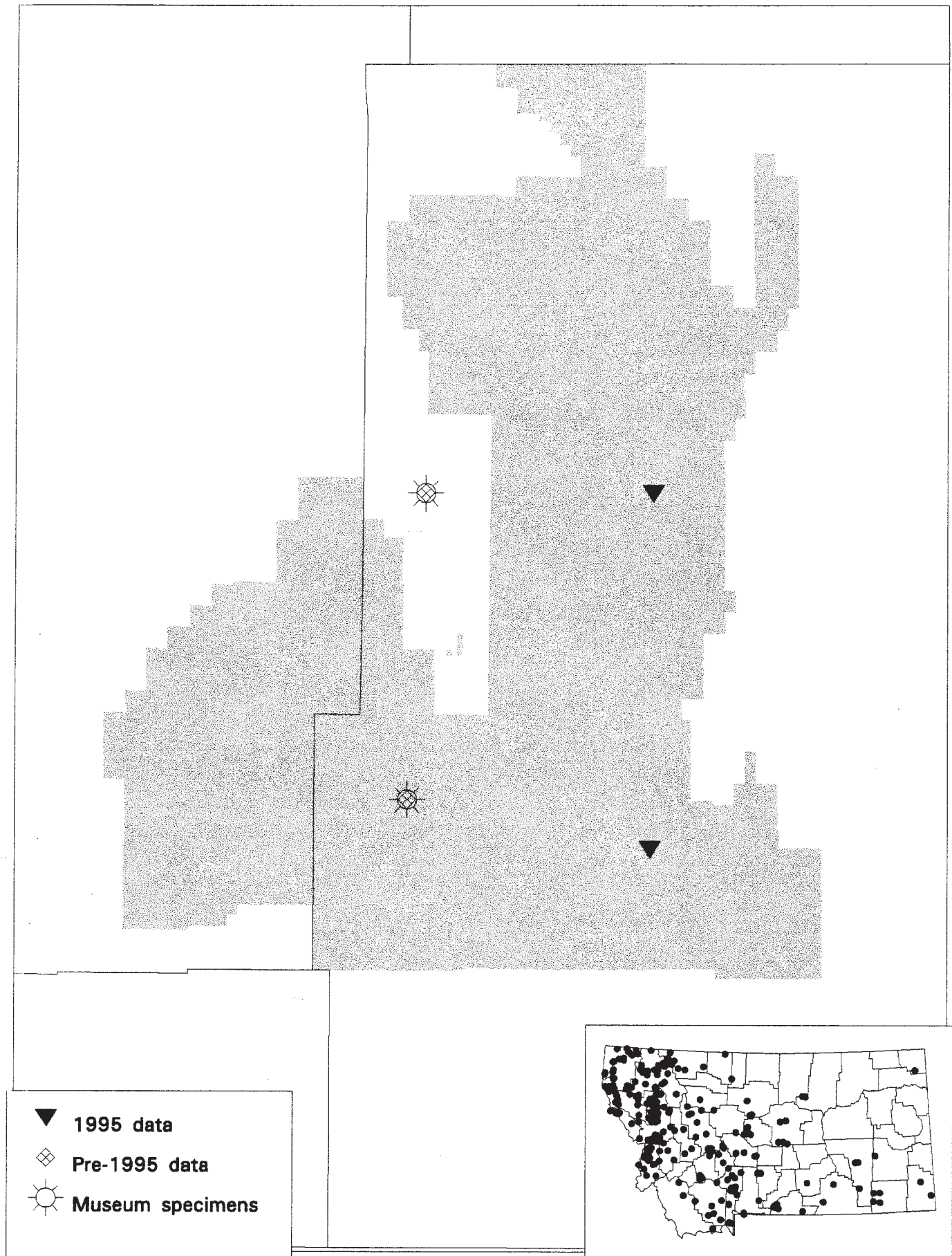
**Surveying:** Walk-through surveys, done on a regular basis in warm, sunny weather probably give the best results without resorting to trapping techniques. They are most easily found near dens in the spring and fall. Funnel trapping is effective and they may occasionally be found by night driving during the mid-summer. Road surveys may also be effective in determining the presence of this species. Data can be enhanced by mark-recapture techniques.

**Status:** The Gopher Snake was seen five times during the 1995 survey on the Ashland District, between 24 May and 28 September; there are fewer than six historical records from in and around the Ashland District, dating back to 1947. The species is probably more common on the District than current records indicate, and any sightings should be documented. Of particular interest would be documentation of any denning sites located.

Montana Natural Heritage Program Rank: G5 S5.



**Thamnophis elegans -- Western Terrestrial Garter Snake**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995

### **Western Terrestrial Garter Snake (*Thamnophis elegans*)**

**Description:** Adult Western Terrestrial (or Wandering) Garter Snakes are smaller in body size than the Common Garter Snake, their length varying from 18-43". Three yellow longitudinal stripes are present (one dorsal, two lateral), but the dorsal stripe is much narrower than that of the Common Garter Snake. A distinctive feature of the Western Terrestrial Garter Snake is a series of alternating black spots which run the length of the body between, and somewhat on, the yellow stripes. The background color between the stripes tends to be more gray compared to the dark brown found in the Common Garter Snake. The ventral surface has a series of dark black/brown blotches which may cover most of the surface. The dorsal scales are keeled, and there are normally 8 upper labial scales.

*Young:* The coloration of young snakes is similar to that of the adults; young are live-born.

**Similar species:** See Common and Plains Garter Snakes.

**Habitat and Habits:** The habitat and habits of the Western Terrestrial Garter Snake are similar to the Common Garter Snake (i.e., they are found in most habitats but are particularly common around wetlands). The two adults seen in late July during the 1995 survey were encountered at stock reservoirs. Females give birth to 4-19 young during the summer (Stebbins 1985).

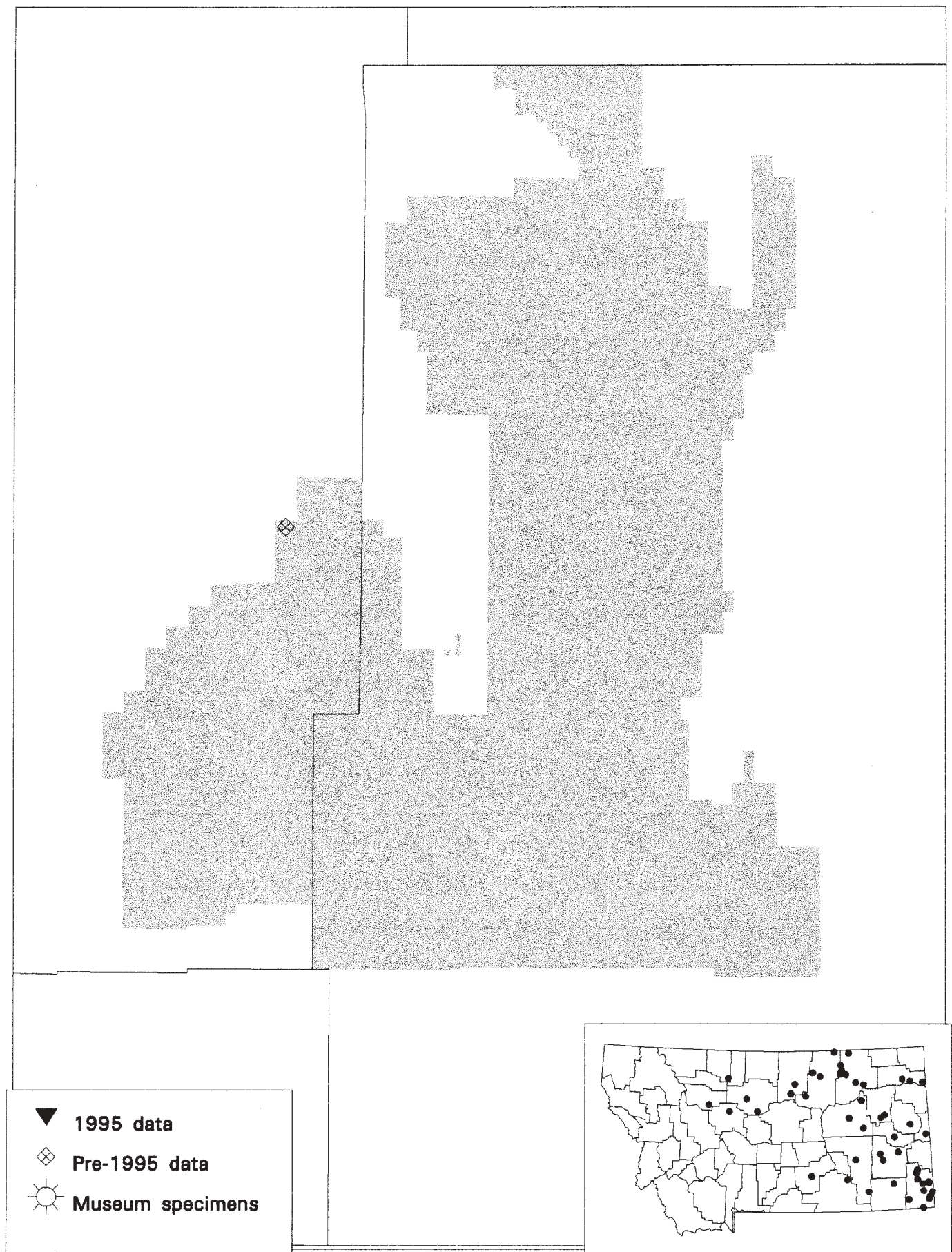
**Surveying:** Timed sight surveys may be conducted around wetlands and riparian feeding areas or at denning areas where higher concentrations of garter snakes occur; clear mornings are best for surveys. Much distributional information may come from recording incidental sightings. More intensive research may be done using funnel traps in combination with drift fences. More intensive research and survey projects may use mark-recapture or radiotelemetry techniques.

**Status:** Western Terrestrial Garter Snakes are reported infrequently from the Ashland District. There are two historical records (specimens collected in 1916 and 1947), and the species was seen twice in late July during 1995 (Appendix 4). It is currently unknown whether or not the few reports reflect the actual relative abundance of this species on the District. All records of garter snakes should be documented until the distribution of the three species is better understood; of particular interest would be documentation of denning sites.

**Montana Natural Heritage Program Rank:** G5 S5.

# Thamnophis radix -- Plains Garter Snake

## Occurrences on or near the Ashland Ranger District, Montana



Species locations from the Montana Natural Heritage Program, December 17, 1995

**Plains Garter Snake (*Thamnophis radix*)**

**Description:** The Plains Garter Snake ranges from 16-42" in length and has a dorsal background color of olive, brown, or black. It has a prominent orange or yellow dorsal stripe and a greenish-yellow stripe on each side located on the 3rd and 4th scale rows above the belly scales. It typically has black vertical bars on the upper lips.

**Young:** Young are live-born and resemble adults.

**Similar species:** The other garter snakes found in Montana have the lateral yellow lines on the 2nd and 3rd scale rows above the belly scales.

**Habitat and Habits::** Plains Garter Snakes are found in prairie habitats but are most common around wetland areas, where they feed around permanent and semi-permanent water bodies. Fish, frogs, toads, mice and invertebrates are the most common food items in the diet of the Plains Garter Snake (Hammerson 1982a, Baxter and Stone 1985). Typical of most garter snakes, they emit a noxious secretion when handled and can be aggressive when disturbed. The Plains Garter Snake is a live-bearer, giving birth to 9-21 young during mid- to late-summer in Colorado (Hammerson 1982a).

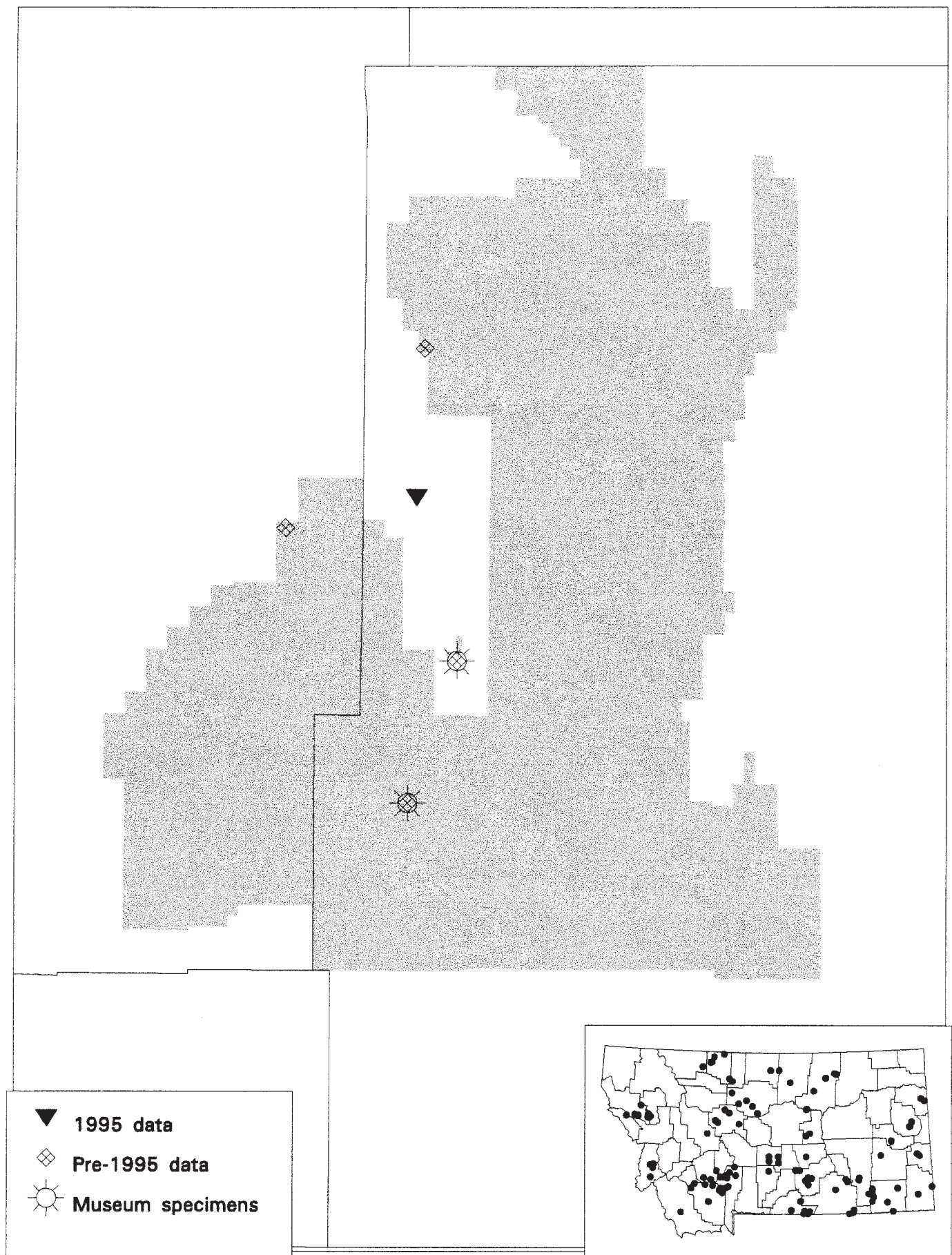
**Surveying:** Timed sight surveys may be conducted around wetlands and riparian feeding areas or at denning areas where higher concentrations of garter snakes occur; clear mornings may be the best survey times. Much distributional information may come from recording incidental sightings. More intensive research may be done using funnel traps in combination with drift fences. The most intensive research and survey projects may use mark-recapture or radiotelemetry techniques.

**Status:** Found over much of eastern Montana. Its status over large portions of the region is unclear due to confusion in the identification of the three garter snakes which occur there. The only location of the Plains Garter Snake from the Ashland District area is a historical record from the Montco wildlife study site in 1985 (Appendix 4). This species was not encountered during the 1995 survey of the Ashland District, and its status on the District is uncertain. Any sightings should be well-documented, with a description written at the time of observation including how *radix* was distinguished from the other garter snakes. Of particular interest would be documentation of any denning sites located.

Montana Natural Heritage Program Rank: G5 S4.



**Crotalus viridis -- Western Rattlesnake**  
**Occurrences on or near the Ashland Ranger District, Montana**



Species locations from the Montana Natural Heritage Program, December 17, 1995

**Western Rattlesnake (*Crotalus viridis*)**

**Description:** Rattlesnakes have a heat-sensing pit located between the nostril and the eye. The fangs are hollow and hinged, allowing them to be folded back against the roof of the mouth. The head is triangular in shape and blunt-nosed. The eyes are slightly elevated. There are several white lines which run along the side of the head. Adult Western Rattlesnakes have a narrow neck but a stout body with total length ranging from 15-60 inches. The dorsal background color varies from pale green to brown with a series of brown or black blotches edged with a dark and then light line extending the length of the body. The blotches often merge into rings on the tail. There are also blotches on the sides of the body. The ventral side is pale yellow to white and without blotches. The scales are keeled. The tail ends in a rattle which helps to warn potential predators of the snake's presence. The young have the same color pattern, but are brighter in color than adults.

**Similar species:** No other snake in Montana has rattles, but see Racer, Gopher Snake and Western Hognose Snake which may have similar color patterns.

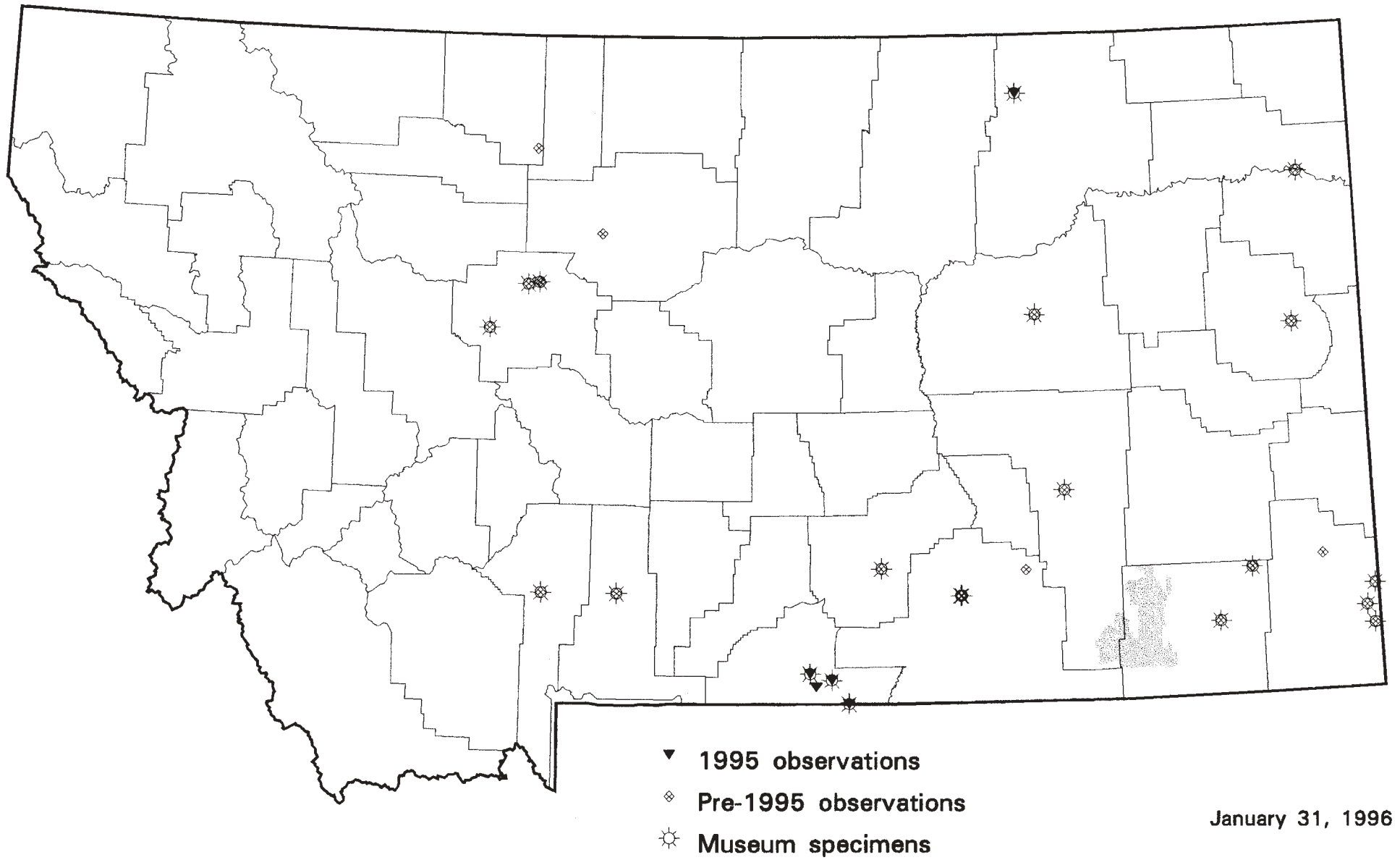
**Habitat and Habits:** The Western Rattlesnake is an inhabitant of more open and arid country, but it is also found in Ponderosa pine stands or mixed-grass coniferous forests. It is more likely to be encountered on south-facing slopes and areas of rock outcrops. It is feared due to its poisonous bite and therefore often needlessly killed. Rattlesnakes may den in large numbers, moving up to 7 miles out from the dens during the summer (Peterson, pers. comm.); den sites are most common in south-facing talus slopes. In Wyoming, it is found at elevations of over 8500 feet (Baxter and Stone 1985). Rattlesnakes prey on a variety of animals including mice, ground squirrels, rabbits, amphibians, and other snakes. Females give birth to 4-21 young in Colorado during the summer (Hammerson 1982a).

**Surveying:** Walk-through surveys on warm sunny days are probably among the best methods for determining presence/absence; easiest to find near den sites in spring and fall. Funnel traps and night driving are both effective techniques. Mark-recapture methods can be used to determine more precise numbers.

**Status:** The Western Rattlesnake was encountered only once (27 September) during the 1995 survey and is known historically from fewer than half a dozen records in and around the Ashland District (Appendix 4). Discussion with area residents leaves the impression that the species is more abundant than the few records indicate. The habit of denning at traditional sites in large numbers makes rattlesnakes vulnerable to commercial collecting or simply killing by fearful people. Observations of Western Rattlesnakes should be reported to better document the presence of this species on the District; of particular interest would be documentation of any denning sites located.

**Montana Natural Heritage Program Rank:** G5 S4.

## Scaphiopus bombifrons (Plains Spadefoot)



## Species Potentially Present on the Ashland District, Custer National Forest

### **Plains Spadefoot** (*Scaphiopus [=Spea] bombifrons*)

**Description:** Adults are colored gray or brown with darker mottling on the back and a white belly. Some individuals have indistinct longitudinal streaking. The pupils of the Plains Spadefoot are vertically elliptical and there is a high, hard lump between the eyes. Its skin is less warty than true toads. The adult has a single tubercle on the hind feet and has a body length of less than 2.5".

*Eggs and Tadpoles:* Oval egg masses of 10-250 eggs are attached to underwater plants or debris. Tadpoles are mottled sooty and olive-yellow above and paler below with gold metallic flecking over all; iris is gold.

**Similar species:** Other Montana frogs and toads have round or horizontally elliptical pupils.

**Habitat and Habits:** Adults are found in grassland and sagebrush areas, particularly in areas with sandy or loose soil (Wheeler and Wheeler 1966, Hammerson 1982a, Baxter and Stone 1985). Except during breeding, they are seldom found in the water. They are primarily nocturnal and emerge from their burrows only following heavy rains. They breed in shallow temporary pools usually following heavy spring or summer rains (Hammerson 1982a). Males call loudly, with groups being heard for up to a mile. Eggs hatch after 2-3 days and tadpoles transform in 6-10 weeks (Wheeler and Wheeler 1966, Hammerson 1982a).

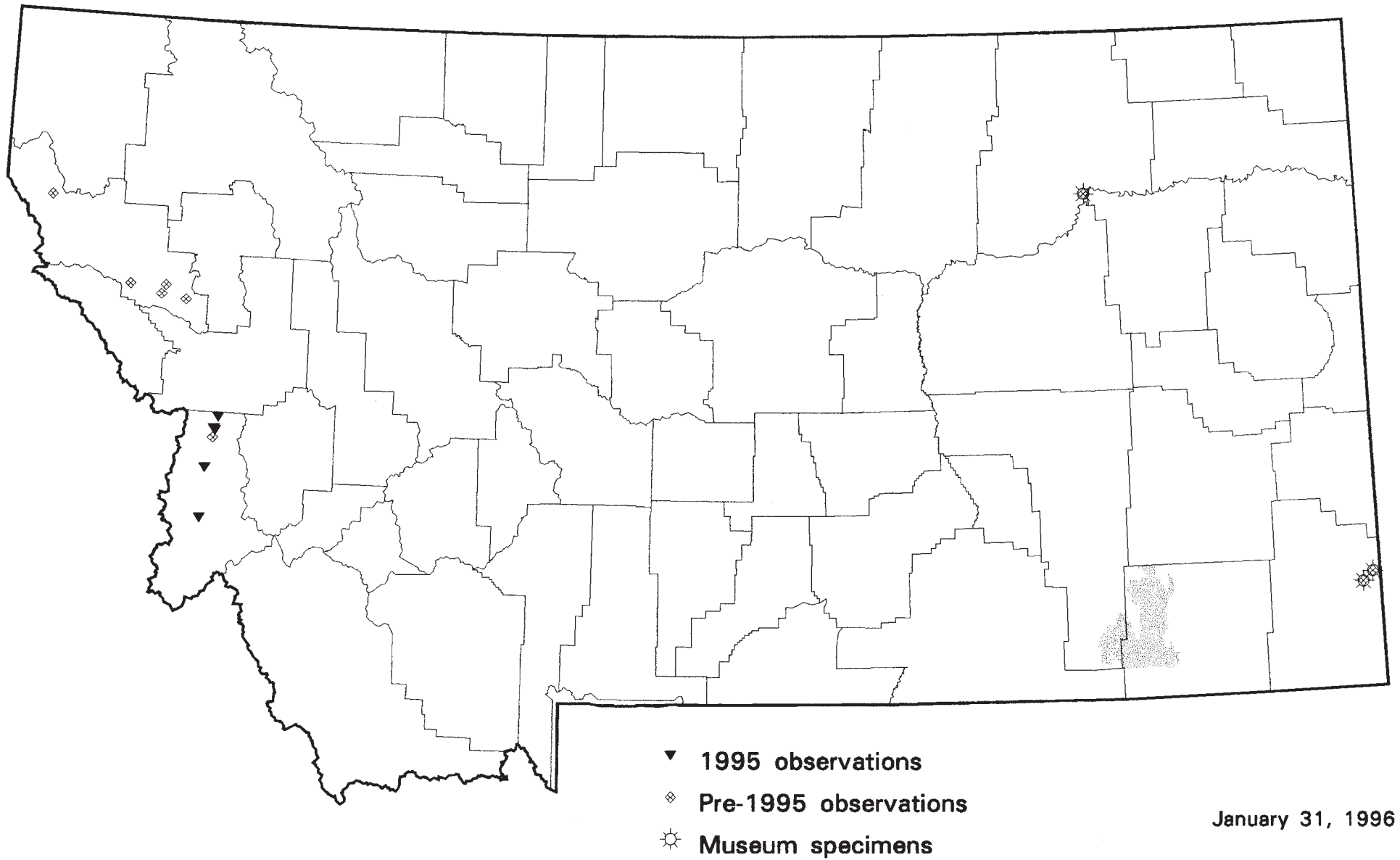
**Surveying:** Adults may be easily found by using their calls for identification when breeding at night or by road hunting on warm, rainy nights. Calling normally takes place only when the temperature is >50° F (Hammerson 1982a). Tadpoles are seen in ponds during the day and can be sampled with a dipnet. Surveying is complicated by the long time periods which this species spends underground, especially during droughts.

**Status:** The Plains Spadefoot is found to the east, north, and west of the Ashland District in Montana (see Reichel 1995b), and will probably be found in appropriate arid open habitat on the District. It is locally common in eastern Montana, but there are large gaps in the known range. It should be watched for in prairie or shrub-steppe habitat on the Ashland District. Any located on the District should be well-documented.

Montana Natural Heritage Program rank: G5 S4?



## *Rana catesbeiana* (Bullfrog)



**Bullfrog (*Rana catesbeiana*)**

**Description:** The largest of North American frogs, adult Bullfrogs may reach 8 inches in body length. The skin is smooth. Adults are usually pale to dark green or brownish green with darker spots or blotches. There are a series of black bands across the legs. The underside is cream to yellowish with gray mottling. No dorso-lateral folds are present, however there is a prominent ridge running from the eye over the tympanum to the shoulder. Males have extensive yellow pigment on the underside, especially in the throat region, and swollen thumbs. The diameter of the tympanum is larger than the diameter of the eye in males but about the same size in females.

**Eggs and Tadpoles:** Egg masses are a 1-2 egg thick film of thousands of eggs and may reach several feet across. Tadpoles may reach 4.5" in total length and are olive green with numerous black spots dorsally; the belly is white to creamy with varying amounts of dark mottling.

**Similar species:** Other Montana Ranid frogs have dorso-lateral folds.

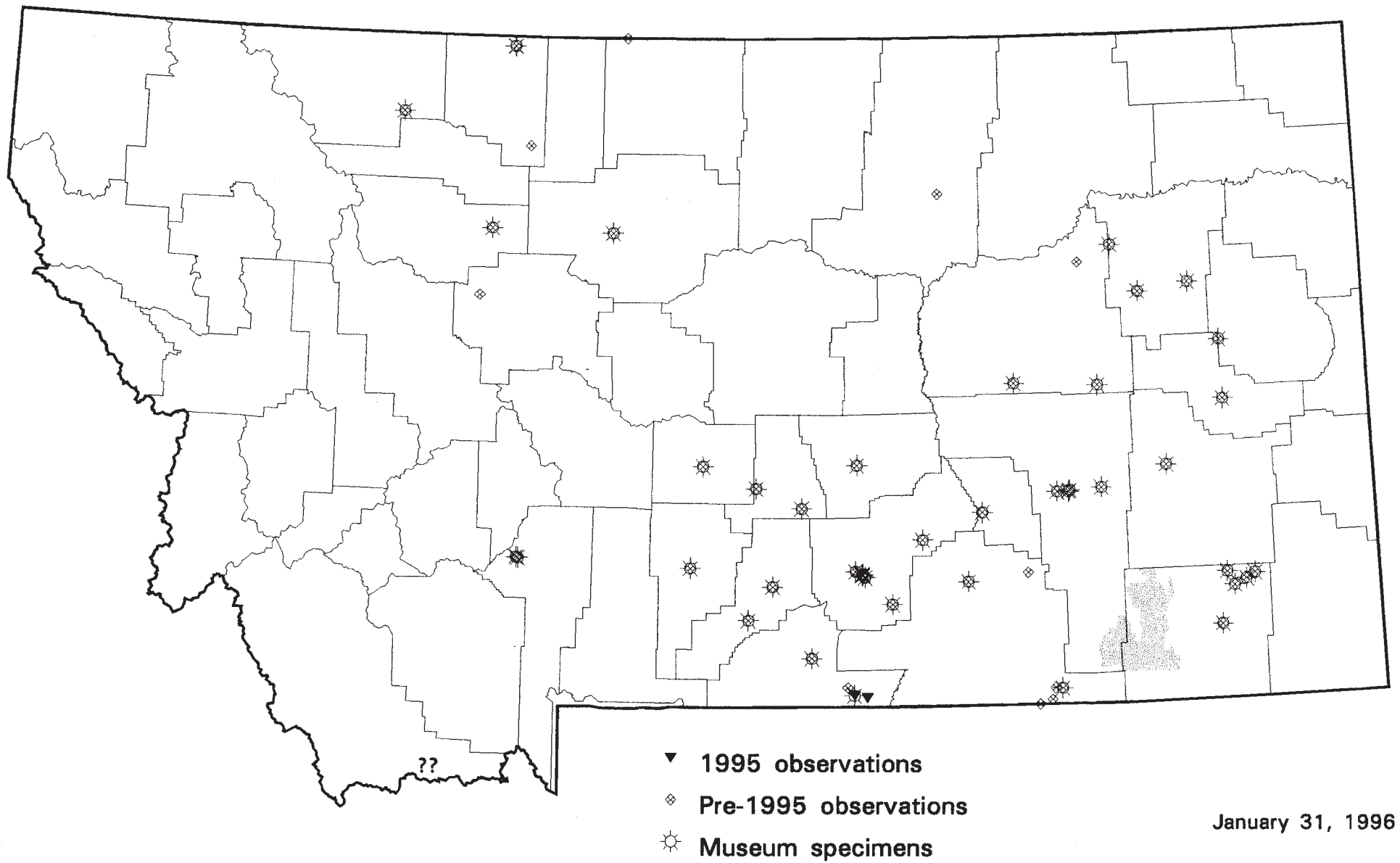
**Habitat and Habits:** Bullfrogs are rarely seen far from the water's edge and are usually in the water. They are associated with larger bodies of quiet water such as ponds, lakes or backwaters of streams, usually with extensive emergent vegetation such as cattails or reeds. They emerge in the spring only after air and water temperatures have warmed considerably and insect populations are beginning to proliferate. Breeding takes place in June when males attract females to their territory by a series of very deep, loud ibrr-umps. The large mass of eggs tend to float on the surface when first laid, but sink into the water prior to hatching (Hammerson 1982a, Nussbaum *et al.* 1983). Tadpoles overwinter in the Pacific Northwest, transforming during their second summer (Nussbaum *et al.* 1983, Leonard *et al.* 1993). The bullfrog is a voracious feeder, eating anything smaller than itself, including ducklings, fish, mice, frogs, and small turtles. Bullfrogs have been implicated in extirpations of native frogs and turtles, and declines in waterfowl production (Hammerson 1982b, Leonard *et al.* 1993).

**Surveying:** Both tadpoles and adults can be easily detected visually or sampled by using a dipnet; both may be found from spring through fall. Capture success of adults is enhanced by night sampling using a headlamp, as they are very wary and do not allow close approach during the day. Eggs are also easy to detect when laid in the early summer.

**Status:** Bullfrogs are native to the eastern and central U.S. and have been introduced to the western states. There are no historical records from the Ashland District area. Bullfrogs were not encountered during the 1995 survey, but conversations with local residents indicate introductions on private lands may have occurred; current status of these populations is unknown. They were introduced into western Montana prior to the 1960's, but the date when they were first brought to Carter County, in southeastern Montana (the nearest known Montana locality to the Ashland District) is unknown (see Reichel 1995b). They should be watched for in ponds, lakes, or slow streams on the Ashland District. Any located should be well-documented.

Montana Natural Heritage Program rank: G5 SE4.

# Phrynosoma douglasi (Short-horned Lizard)



**Short-horned Lizard** (*Phrynosoma douglasi*)

**Description:** The Short-horned lizard has a broad, somewhat flattened body and relatively short limbs and tail. It is generally tan to gray with dark and light spots and blotches; the belly is white. There is a distinctive line of pointed scales along each side, and the head has short, blunt horns pointing backward. Adult lizards range from 1.7 - 5.5" in length.

**Young:** Young are live-born and resemble small adults.

**Similar species:** None.

**Habitat and Habits:** The Short-horned lizard is found in a variety of habitats, including dry open forests, grasslands, and sagebrush; the soil is usually loose or sandy. In firmer soil situations, it may use the burrows of other animals. It is active during the day, typically with the peak of activity in mid-late morning. A Short-horned Lizard may squirt blood from its eyes when disturbed. Little is known about reproduction in this part of the range; young are born in late summer. Ants are the primary food of the species.

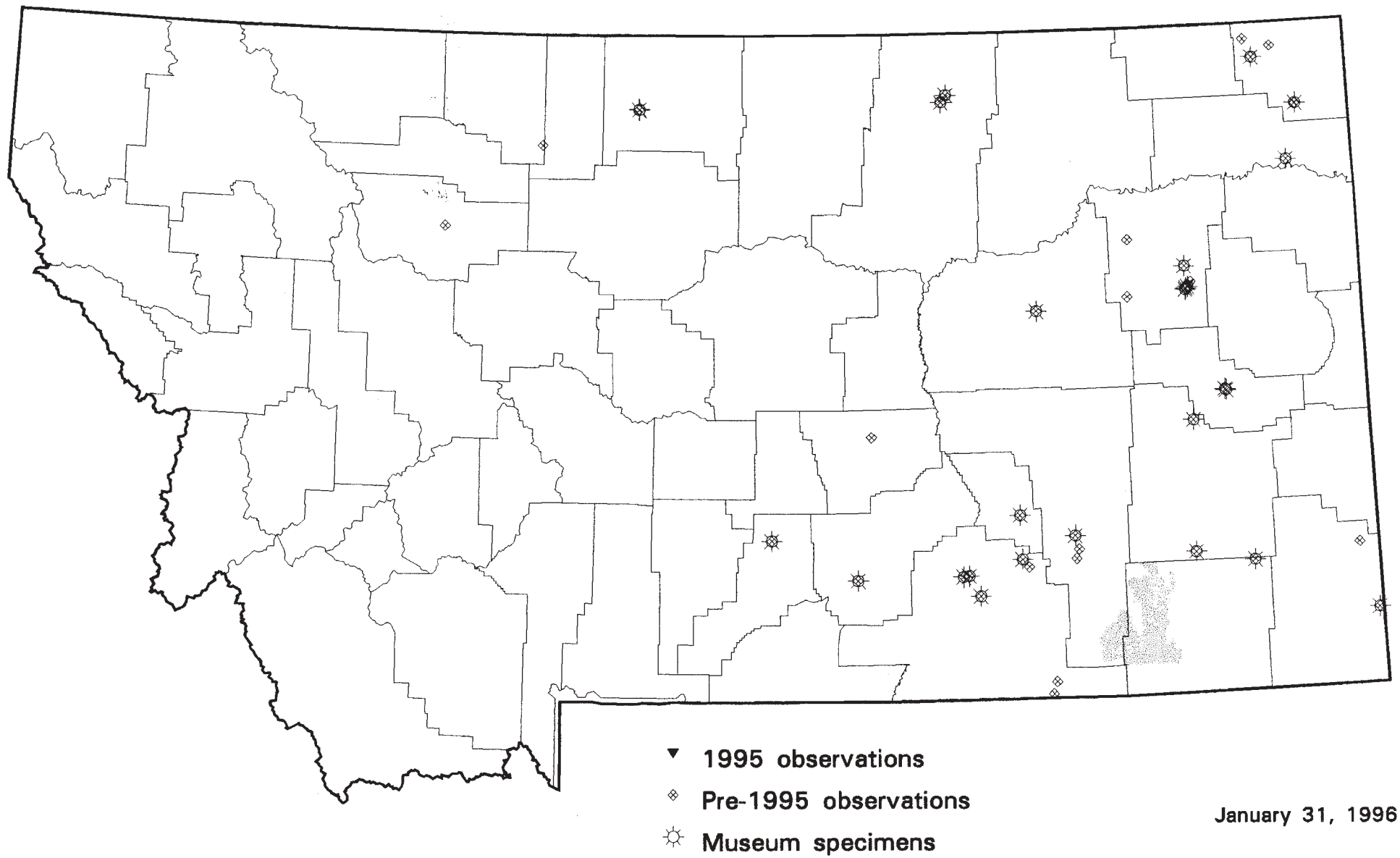
**Surveying:** They may be surveyed for by slowly walking through appropriate habitat and watching carefully for them; look carefully near ant mounds; this technique has low success with Short-horned Lizards however. As with many lizards and snakes, they are easily missed. Carefully documented incidental observations may provide the best clues to their distribution. They may be also taken in pitfall or funnel traps in combination with drift fences.

**Status:** The Short-horned Lizard subspecies found in Montana (*P. d. brevirostra*) was a U.S. Fish and Wildlife Service Category 2 Candidate for listing (U.S. Fish and Wildlife Service 1994). It is widely distributed (but apparently localized) in eastern Montana; none were encountered during the 1995 survey, but Montana records exist to the east, north, and west of the Ashland District (see Reichel 1995b). This species may be vulnerable to collecting for the pet trade and agricultural conversion of native habitats. It should be watched for in open pine, prairie, or shrub-steppe habitat with loose or sandy soils; all sightings should be documented.

**Montana Natural Heritage Program Rank:** G5 S4. A Species of Special Concern.



# Heterodon nasicus (Western Hognose Snake)



### **Western Hognose Snake (*Heterodon nasicus*)**

**Description:** The Western Hognose Snake is a mid-sized, heavy-bodied snake reaching 32". The dorsal ground color is yellowish- to grayish-brown, with 3 rows of darker brown to black blotches running down the back. The belly is dark gray to black, sometimes checkered. Its nose has a keel on the top and is upturned.

*Eggs and Young:* Clutches have 7-15 eggs which are white and elliptical, with thin, papery shells; length averages 32.5 mm (26-38 mm) and width 18 mm (14-23 mm). Young are 139-197 mm at hatching and are similar in color and pattern to adults (Platt 1969).

**Similar Species:** No other Montana snake has a keeled nose. Coloration is similar to both the Gopher Snake, Western Rattlesnake and juvenile Racer.

**Habits and Habitat:** The Western Hognose Snake is found on the plains of eastern Montana. It seems to prefer arid areas, farmlands and floodplains, and particularly areas of gravelly or sandy, loose soil. The keeled or shovel-like nose is thought to help it to dig down to its food, which it finds by smell. Apparently toads are its preferred food, though frogs, insects, and other small animals are also eaten (Platt 1969). It is active primarily during the daylight hours. Little is known of reproduction in Montana. It is likely that a female will only breed every other year in Montana.

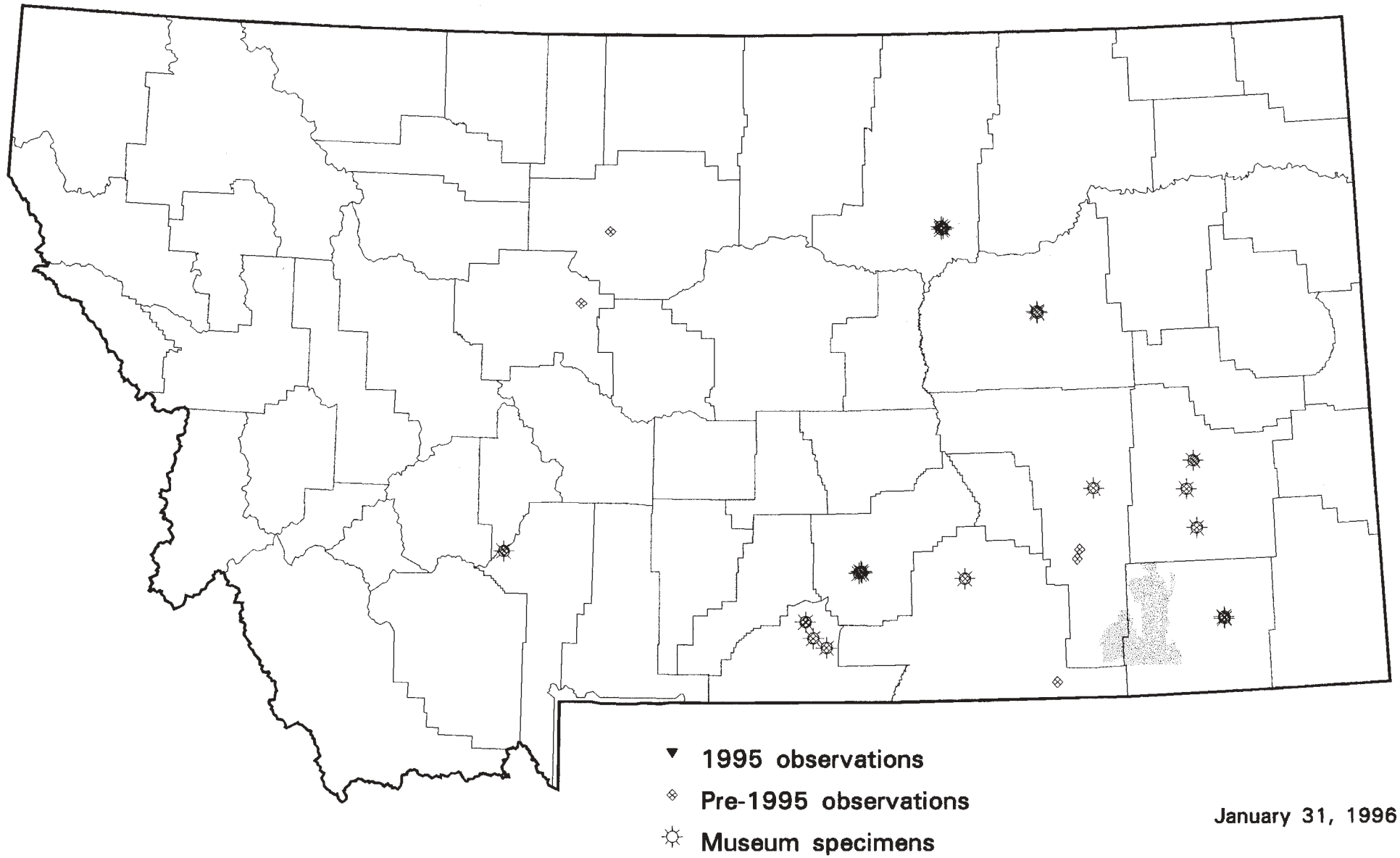
The Hognose is famous for its behavior in the face of a threat. At first it will puff up its neck, as does a cobra, and hiss and strike at its enemy. However, this is all a bluff; very rarely will it actually bite. If this threatening strategy does not work, it will pretend to die. It appears to go into convulsions, writhing on the ground, sticking its mouth in the dirt, and eventually rolling on its back and going into a trance that makes it appear to be dead. If turned right-side-up, it will roll back over and continue its deception. If left alone for a few minutes, it will right itself and continue on its way. The initial aggressive display and basic rattlesnake-like coloration cause many to be killed needlessly by people who mistakenly believe it to be venomous.

**Surveying:** They may be surveyed for by slowly walking through appropriate habitat and carefully watching for them; conducting surveys on warm, sunny days enhances sampling success. However, as with many lizards and snakes, they may easily be missed. Carefully-documented incidental observations may provide the best clues to their distribution. They may be also taken in pitfall or funnel traps with drift fences. Mark-recapture methods offer the best opportunity for determining population status.

**Status:** The Western Hognose Snake was not found on the Ashland District during the 1995 survey. There are historical records, however, to the east, and closer to the north and west of the Ashland area (see Reichel 1995b). They may occur on the Ashland District (conversations with area residents indicate they do), particularly in sandy or loose soil areas. They should be watched for, and any sightings should be documented. There are relatively few reports of the Western Hognose Snake from Montana. It is collected for the pet trade, and populations may be vulnerable to commercial collectors. Additionally, since toads are its preferred food, any decline in toad populations would be expected to negatively impact Western Hognose Snakes. Of particular interest would be documentation of any denning sites located.

**Montana Natural Heritage Program Rank:** G5 S3? A Species of Special Concern.

# Lampropeltis triangulum (Milk Snake)



**Milk Snake (*Lampropeltis triangulum*)**

Description: The Milk Snake is a slender and medium-sized snake (to 42 inches in length or more), with smooth scales. It has a highly recognizable series of red to orange saddles or rings that are bordered by black bands and separated by white or yellow bands. Width of dark and light bands can vary widely. The subspecies in Montana (*L. t. gentilis*) tends to be paler, with orange bands replacing red, and a light belly with few or no black spots.

Similar species: None in Montana.

Habitat and Habits: Little is known of Milk Snakes in Montana because only a few have been reported. In Wyoming and elsewhere they are usually found near cliffs, talus, outcrops, and rocky hillsides in forested and open country. They can be found in or under rotten logs. Milk Snakes are secretive and most active at night. They eat a variety of vertebrates, including other snakes, lizards, eggs, small mammals, and sometimes invertebrates such as earthworms and insects. Eggs are laid in mid-summer. Milk Snakes sometimes vibrate their tails when disturbed. Their name stems from an old tale alleging that these snakes milk cows.

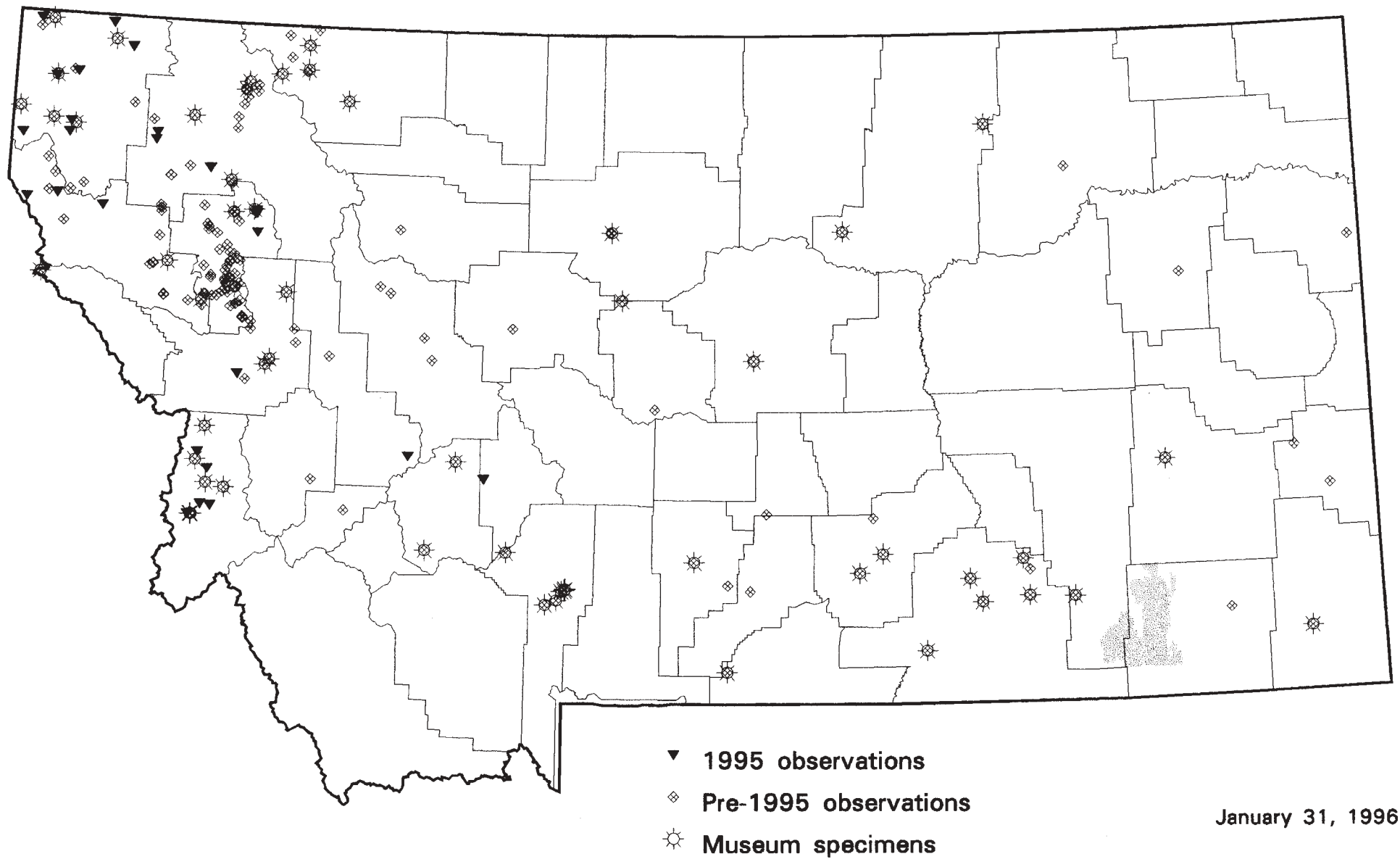
Surveying: Timed-sight surveys may be conducted around cliff bases and outcrops. Most distributional information will likely come from recording incidental sightings.. More intensive research may be done using funnel traps in combination with drift fences. The most intensive research and survey projects may use mark-recapture or radio-telemetry techniques.

Status: Milk Snakes are very rare and local in Montana. There are no records from the Ashland District, but there are records southeast of Miles City in Custer County (Reichel and Flath 1995). The subspecies found in Montana is highly sought for the pet trade. All records of Milk Snakes should be fully documented; of particular interest would be documentation of denning sites.

Montana Natural Heritage Program Rank: G5 S1. A Species of Special Concern.



# Thamnophis sirtalis (Common Garter Snake)



### **Common Garter Snake** (*Thamnophis sirtalis*)

**Description:** The Common Garter Snake consists of two color phases in western Montana, and ranges from 18-52" in length. Both phases have three yellow longitudinal stripes: one located dorsally and one on each side. Between the yellow stripes is a black stripe broken with red spots in one color phase but lacking red in the other. The form lacking red spots is not known from eastern Montana, but may be present there and should be watched for. Ventral coloration varies from yellow to bluish, and some individuals of the red-sided color phase have small black spots on the edge of the ventral scales. The dorsal scales are keeled, and normally there are 7 upper labial scales.

**Young:** The coloration of young snakes is similar to that of the adults; young are live-born.

**Similar species:** The Western Terrestrial Garter Snake has black spots overlapping the dorsal yellow stripe; the background color between stripes tends to be brownish. The Plains Garter Snake has the side yellow stripe on the 3rd and 4th scale rows above the belly scales and the dorsal stripe is often orange or red.

**Habitat and Habits:** Garter snakes are found in all forest habitats but are more common at lower elevations around marsh-bog-pond situations, where they prey on young fish, frogs, toads, mice and invertebrates. They are sometimes confused with water snakes because of their frequent aquatic exploits; in reality there are no true water snakes in Montana. Typical of most garter snakes, they emit a noxious secretion when handled and can be aggressive when disturbed. Garter snakes eat a variety of vertebrates and invertebrates, with the Common Garter Snake concentrating more on amphibians than the Western Terrestrial Garter Snake. The Common Garter Snake is a live-bearer, giving birth to 12-18 young during the summer in Colorado (Hammerson 1982a).

**Surveying:** Timed-sight surveys may be conducted around wetlands and riparian feeding areas or at denning areas where higher concentrations of garter snakes occur; clear mornings are the best survey times. Much distributional information may come from recording incidental sightings. More intensive research may be done using funnel traps in combination with drift fences. More intensive research and survey projects may use mark-recapture or radiotelemetry techniques.

**Status:** Common Garter Snakes are not known from the Ashland District, although there are records from Rosebud and Powder River counties (see Reichel 1995b). All records of garter snakes should be documented until the distribution of the three species is better understood; of particular interest would be documentation of denning sites.

**Montana Natural Heritage Program Rank:** G5 S5.

## RECOMMENDATIONS

### Surveys and Research

- 1) All incidental sightings of amphibians and reptiles from the Ashland District, Custer National Forest should be recorded and forwarded to the Montana Natural Heritage Program. A half-day training session for biologists (including seasonal employees) and other interested field people in spring would raise awareness of this data need and provide the training needed for accurate identification of animals observed; barring this, Reichel and Flath (1995) have photos of all adult species potentially present on the District. Certainly all incidental sightings of reptiles should be recorded; this is the most efficient way to get data on most of these species.
- 2) Due to the time constraints and relatively large area covered, the 1995 survey should not be regarded as a definitive index of all the amphibians and reptiles or their distribution on the Sioux-CNF. The secretive habits of many amphibians and reptiles and our lack of knowledge regarding their reproductive behavior makes it difficult to assess their overall status. We recommend that additional surveys be conducted, concentrating on: A) potential Northern Leopard Frog breeding sites; B) re-surveying all historic amphibian sites; C) gathering additional distribution information on Sagebrush Lizards throughout the District (perhaps through use of several pitfall and drift-fence transects); D) more intensive searches in sandy soil areas for Short-horned Lizards (again, pitfall and drift-fence transects would be useful); E) nocturnal road surveys for snakes, using standard routes driven repeatedly at regular time intervals; F) routine searches along larger streams for evidence of Spiny Softshells and Snapping Turtles.
- 3) When more breeding locations for amphibians are known, long-term monitoring of typical marsh-pond habitats should be set up at several sites in order to evaluate relative numbers and breeding success of the more common species: Tiger Salamander, Western Chorus Frog, Northern Leopard Frog, and Painted Turtle. Garter snakes should be routinely looked for at these sites. Particular attention needs to be given to any toad or Bullfrog breeding sites found.
- 4) Life history and ecology of the amphibians in Montana is poorly known for most species. Long-term monitoring will give us information on timing of and habitat requirements needed for successful breeding.
- 5) Sightings on Ashland District lands of the Plains Spadefoot, Bullfrog, Short-horned Lizard, Western Hognose Snake, Milk Snake, and Common Garter Snake would represent known first-time occurrences; thus it is important to document and record such data. Preferably, either photos should be taken or, if appropriate, a specimen collected; at the very least, a description should be written at the time of the observation.

## Management

1) With an increasing number of amphibians species declining for various reasons, it seems reasonable to pro-actively manage habitat to support them. While not all ways of preserving these species are currently known, several management actions could certainly negatively impact them. Without adequate breeding areas, amphibians cannot survive, and the types of water used is often species-specific.

- a) Fish stocking in currently fishless lakes and ponds in which amphibians breed should be carefully evaluated. Fish introductions are thought to be a major factor in frog declines in the Sierra Nevada Mountains and probably elsewhere as well (Hayes and Jennings 1986).
- b) When improving springs or seeps for livestock, leave a portion of the area suitable for amphibian reproduction. This could include a small fenced off area above where water is diverted and put into a watering tank.
- c) Springs, seeps, and both permanent and temporary ponds should be considered when analyzing effects of land management activities such as grazing, logging, and road building.

2) A critical component of the life cycle in snakes is the wintering den. Many species hibernate in large aggregations in traditionally-used sites. Often these hibernacula are used by several species, and mating takes place at the den site. Snakes then move out for up to 7 miles for the summer, returning in the fall. These sites are typically in areas where snakes can get well down into an area of fractured rock, often near cliffs or in talus slopes. While these sites are robust, road building or mining may nonetheless destroy them. Den sites should be protected and data relating to their locations kept where successive biologists have access to them.



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**APPENDIX 1.**

**DATA SHEETS USED FOR**

**AMPHIBIAN AND REPTILE**

**SURVEYS AND OBSERVATIONS**



**AMPHIBIAN SURVEY DATA SHEET: INSTRUCTIONS** This data sheet is designed to facilitate quick recording of data from field surveys of amphibians and their habitats. It appears complex and intimidating, but actually can be completed in a short amount of time after a minimum amount of training. Many variables require only the correct choice to be circled, and the remaining variables are numerical and easy to determine. The data sheet is divided into four sections, divided by double lines. Each section describes a cohesive set of variables. In addition the back of the sheet includes a grid for a rough sketch of the site and space for additional comments. The map is optional, but the future value of the data is enhanced if it is supplied.

**SECTION 1 - LOCALITY** *These data are essential. Many amphibian surveys have been hampered by the inability to relocate exact locations in the historical record. Some of this information can be completed in the office after the survey.*

**DATE:** Use the format DD-MMM-YY (e.g., 05-APR-92).

**BEGIN TIME:** List the time survey of habitat for amphibians began in 24 hour format.

**END TIME:** List the time the survey ended in 24 hour format. (The total time (END TIME - BEGIN TIME) should reflect only the amount of time spent searching for amphibians. Total time plus number of observers may be used to assess relative abundance.)

**OBSERVERS:** List names or initials of all persons involved in searching.

**LOCALITY:** Describe the *specific* geographic location of the site. Use air distance in two directions (e.g., 5km N and 7.5 km W) of a map landmark that likely will not change (distance from a large town or city is not all that helpful).

**STATE:** Use the 2-letter abbreviation.

**COUNTY:**

**MAP NAME:** List the name of the U.S.G.S. quadrangle or other map used to locate the site.

**OWNER:** List the public land manager (e.g., Roosevelt Nat. Forest or Rocky Mtn NP), or name of the owner if the site is on private land (listing the owner's name will make it clear that you did not trespass to survey the site).

**ELEVATION:** Circle the scale used; meters are preferred.

**T:** township **R:** range **S:** section

**SECTION DESCRIPTION:** Describe the location of the site within the section (e.g., SE ¼ or NE ¼ of SE ¼)

**UTM ZONE, NORTHING, EASTING:** Universal Transverse Mercator coordinates

are preferred over longitude and latitude. The UTM zone is listed on newer topographic maps. If you are using a map without the UTM grid, substitute latitude for Northing and longitude for Easting.

**SECTION 2 - SPECIES DATA** *List all amphibian species observed. If garter snakes are seen, list them here also.*

**SPECIES:** Use the scientific name. Convenient shorthand is to use a 4-letter code made up of the first 2 letters of the genus and species (e.g., *Rana sylvatica* would be RASY).

**ADULTS/JUVENILES:** Indicate presence with a check, but numbers seen are more valuable data

**CALLING?:** Circle Y if frogs are vocalizing in a breeding chorus, or if a breeding aggregation of species that don't call (e.g., *Bufo boreas*) is observed.

**TADPOLES/LARVAE:** Same as for adults/juveniles

**EGG MASSES:** Same as above. Numbers of egg masses are especially valuable data. If possible, describe the developmental stage of eggs in the space for additional notes on the back of the form.

**METHOD:** Circle how observations were made: **VISUAL/AURAL ID** - species identified without picking it up, either by sight or by recognition of the breeding call; **HAND COLLECTED** - animal was picked up and identified in the field (higher confidence than visual id); **DIP NET/SEINE** - the usual method of collection for larvae; **TRAPPED** - minnow-type traps are also used for larvae; **VOUCHER COLLECTED?** - circle yes or no (voucher specimens are recommended for every site, especially if identification is uncertain and for larvae). Indicate voucher status in addition to method used.

**FISH PRESENT?:** If yes, list species if you

can. Circle the question marks if you are not certain, but suspect that fish are present.

**ENTIRE SITE SEARCHED?:** If no, list either the meters of shoreline or the area (m<sup>2</sup>) of habitat (e.g., amount of wet meadow) searched.

**SECTION 3 - PHYSICAL AND CHEMICAL DATA** *Water chemistry data are difficult to collect accurately without thorough planning and quality equipment; these data are optional. Weather data are important for determining the quality of the observations (e.g., was an absence of amphibians due to observations made during a blizzard?)*

**WEATHER, WIND:** Indicate atmospheric conditions

**AIR TEMPERATURE:** Take at chest height in shade. The Celsius scale is preferred.

**WATER TEMPERATURE:** Take 1 meter from margin and at 2 cm depth, or where egg masses are observed.

**COLOR:** This is a qualitative assessment of whether the water clear or tea-colored from organic (humic) acids.

**TURBIDITY:** This is a qualitative assessment of whether the water clear or clouded from suspended particulate matter.

**SECTION 4 - HABITAT DESCRIPTION** *These data are important for developing hypotheses to explain changes in abundance of amphibians. This section needs to be filled out only once for each site (a reasonable amphibian survey should include at least 2 - 3 visits to each site in one season).*

**ORIGIN:** Decide whether the lake is a natural geologic formation or man-made. Bodies of water enlarged by a dam are problematic. List them as man-made, but add an explanation in the space for additional notes on the back of the form.

**DRAINAGE:** Circle whether the site has permanent drainage, no drainage, or

occasional drainage. Determining the potential for occasional drainage requires judgement. Look for clues in the topography and vegetation.

**DESCRIPTION:** Decide how best to describe the site. If there is evidence of past or present beaver activity, circle one of these choices in addition to your choice.

**LENGTH, WIDTH:** Record the maximum length and width of lakes and ponds. For streams, record the length and average width of the reach searched.

**MAXIMUM DEPTH:** Most times, you will not have access to a boat, so estimate depth (deep lakes are usually not important to amphibians).

**STREAM ORDER:** This is an index of stream size, and you will need a topographic map to determine it. First-order streams have no tributaries, second-order streams are formed by the confluence of two 1<sup>st</sup>-order streams, third-order streams are formed by the confluence of two 2<sup>nd</sup>-order streams, and so on.

**PRIMARY SUBSTRATE:** Circle the type that covers the majority of the bottom of the site.

**EMERGENT VEGETATION:** Circle the percentage of the margin of the site with emergent vegetation present, and list the dominant species. If you are botanically-disadvantaged, list the categories of the dominant species (e.g., cattail, sedges, etc.).

**NORTH SHORELINE CHARACTERS:** Describe the north shore of a lake or pond in terms of shallow water and emergent vegetation. This is important in evaluating quality of breeding habitat in some mountain locations.

**FOREST CHARACTERS:** List the closest distance between the water and the surrounding forest, and list the most common tree species. Leave these fields blank if there is no forest. Describe other surrounding habitat types in the notes section on the back of the form.

## (circle choice for shaded variables; supply value for others)

(ver. 2/7/92)

DATE		BEGIN TIME		END TIME		OBSERVERS	
LOCALITY							
STATE		COUNTY		MAP NAME		OWNER	
						ELEVATION (circle scale) M FT	
T	R	S	SECTION DESCRIPTION		UTM ZONE	NORTHING (or LAT)	
						EASTING (or LONG)	
AMPHIBIAN AND/OR GARTER SNAKE SPECIES PRESENT (INDICATE NUMBERS IN CATEGORIES IF POSSIBLE)							
CIRCLE METHOD AND INDICATE IF VOUCHER SPECIMEN WAS COLLECTED							
SPECIES		ADULTS/JUVENILES		CALLING?		TADPOLES/LARVAE	
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
						VISUAL/AURAL ID DIP NET/SEINE HAND COLLECTED TRAPPED VOUCHER COLLECTED? YES NO	
						VISUAL/AURAL ID DIP NET/SEINE HAND COLLECTED TRAPPED VOUCHER COLLECTED? YES NO	
						VISUAL/AURAL ID DIP NET/SEINE HAND COLLECTED TRAPPED VOUCHER COLLECTED? YES NO	
						VISUAL/AURAL ID DIP NET/SEINE HAND COLLECTED TRAPPED VOUCHER COLLECTED? YES NO	
						VISUAL/AURAL ID DIP NET/SEINE HAND COLLECTED TRAPPED VOUCHER COLLECTED? YES NO	
FISH PRESENT?		YES ??? NO		FISH SPECIES:			
ENTIRE SITE SEARCHED?		YES NO		IF NO, INDICATE AREA		METERS OF SHORELINE M <sup>2</sup> OF HABITAT	
PHYSICAL AND CHEMICAL ENVIRONMENT (CHEMISTRY VARIABLES OPTIONAL - USE EXTRA SPACES FOR ADDITIONAL MEASUREMENTS)							
WEATHER:		CLEAR		OVERCAST		RAIN SNOW	
						WIND: CALM LIGHT STRONG	
AIR TEMP (circle scale)		°C °F		WATER TEMP (circle scale)		°C °F	
				COLOR:		CLEAR STAINED	
						TURBIDITY: CLEAR CLOUDY	
pH		ANC					
SITE DESCRIPTIONS - (SKETCH SITE AND PUT ADDITIONAL COMMENTS ON BACK OF SHEET) OMT THIS SECTION IF DATA HAVE BEEN COLLECTED ON A PREVIOUS VISIT							
ORIGIN:		NATURAL		MAN-MADE		DRAINAGE: PERMANENT OCCASIONAL NONE	
DESCRIPTION:		PERMANENT LAKE/POND		TEMPORARY LAKE/POND		MARSH/BOG STREAM SPRING/SEEP ACTIVE BEAVER POND INACTIVE BEAVER POND	
SITE LENGTH (M)		SITE WIDTH (M)		MAXIMUM DEPTH:		< 1 M 1 - 2 M > 2 M	
STREAM ORDER		1		2		3 4 5 +	
PRIMARY SUBSTRATE:		SILT/MUD		SAND/GRAVEL		COBBLE BOULDER/BEDROCK OTHER	
% OF POND LAKE MARGIN WITH EMERGENT VEGETATION:		0		1 - 25		25 - 50 > 50	
EMERGENT VEGETATION SPECIES (LIST IN ORDER OF ABUNDANCE)							
NORTH SHORELINE CHARACTERS:		SHALLOWS PRESENT		SHALLOWS ABSENT		EMERGENT VEG PRESENT EMERGENT VEG ABSENT	
DISTANCE (M) TO FOREST EDGE		FOREST TREE SPECIES:					
Gap/USFS Habitat		USFWS Habitat					

Comments: Include method of observation, measurements, documentation for species of special concern, disposition of specimens, weather, etc. Numbers correspond to those on the other side of this sheet. Use additional space or sheets if necessary.

Example: Sunny warm day, about 75°. Adults (3 seen; 2 heard calling only) at margin of ponds in cattails. Very small tadpoles seen; 1 egg mass still present.

Example: Found dead in the road in sagebrush flat near rimrocks; 24" long; Colored with bands of yellow / black / red / black / yellow...; deposited in MSU Museum

1.

2.

3.

4.

5.

6.

7.

8.

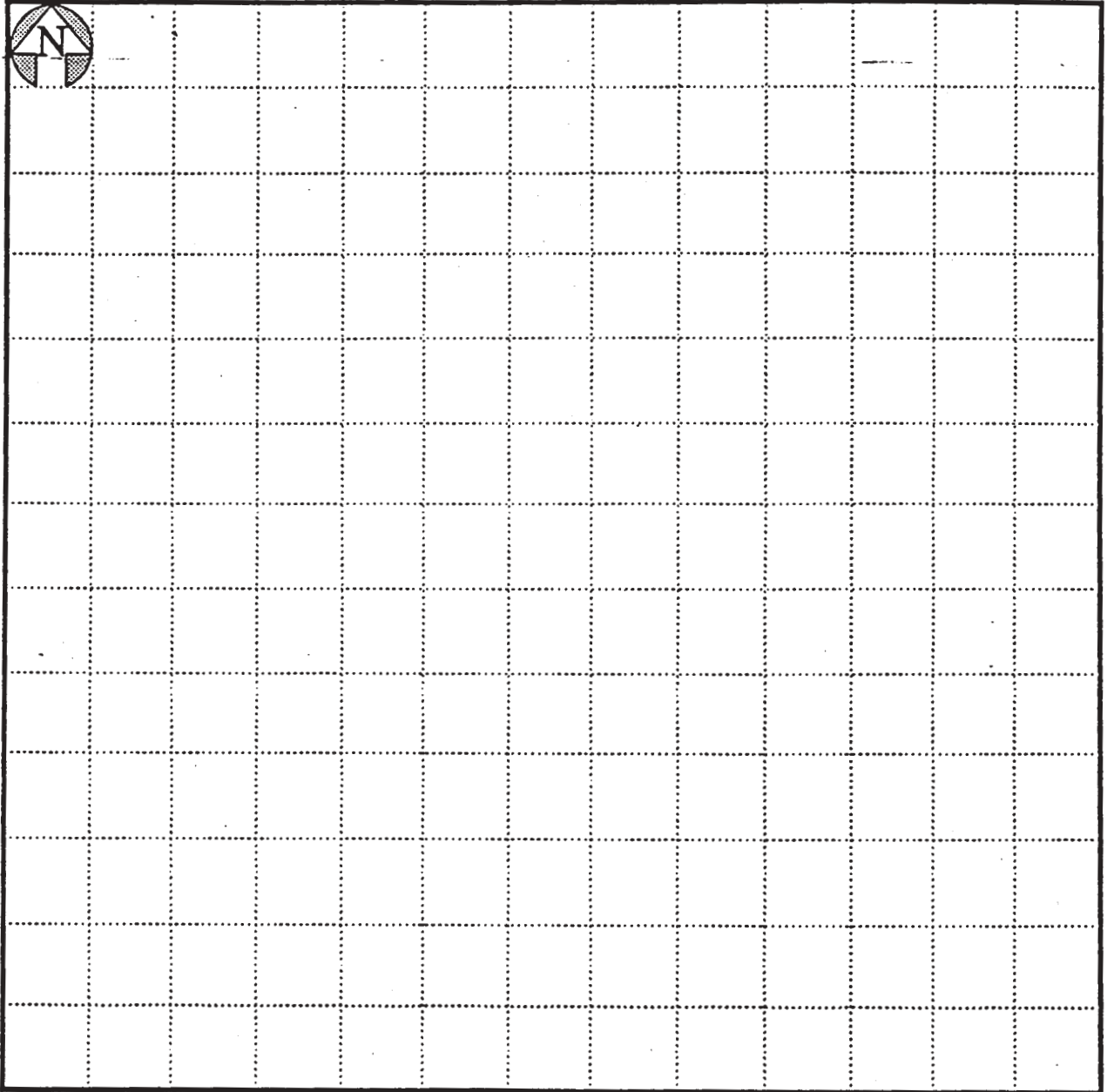
9.

10.

11.

ROUGH SKETCH OF SITE

GRID SPACING IS \_\_\_\_ METERS BETWEEN LINES



ADDITIONAL NOTES:

**APPENDIX 2.**

**SITES SURVEYED DURING 1995**

**AMPHIBIAN AND REPTILE SURVEYS**



Appendix 2. Sites surveyed during 1995 amphibian and reptile surveys.

Site	Location	Elevation	Date	Start Time
<b>CUSTER NATIONAL FOREST - ASHLAND DISTRICT</b>				
Sartin Draw Reservoir*	T01S R46E S25 NW	3390	23 July 95	1250
Road Creek Reservoir	T02S R46E S13SW	3610	01 June 95	0815
Coal Creek Hills*	T03S R45E S10NE	3280	28 Sept 95	1400
Unnamed Reservoir, E. Fork Otter Creek	T03S R46E S05NW	3290	23 July 95	0940
Unnamed Pond, on F.S. Road 775	T03S R46E S12NW	3690	01 June 95	1000
Fear Spring*	T04S R47E S04SW	3910	31 May 95	1745
Smith Reservoir	T04S R47E S08NW	3610	22 July 95	1505
Unnamed Reservoir, River Front Road	T05S R43E S9SE	3110	23 July 95	1635
Drop Tube Reservoir	T05S R45E S22NW	3290	22 July 95	0915
Howard Reservoir	T05S R46E S23NE	3460	22 July 95	1005
Bowers Reservoir*	T05S R47E S03NW	3730	22 July 95	1112
Fifteenmile Creek, at F.S. Road 784	T05S R47E S20SW	3570	22 July 95	1145
Dalzells Spring*	T05S R47E S21N, 16S	3730	21 July 95	1555
Blacks Ponds (Reservoir)	T06S R44E S01NE	?	20 July 95	0845
Unnamed Pond, NW of F.S. Road 802	T06S R44E S03SW	?	20 July 95	1030
Poker Jim Butte*	T06S R44E S08SE, 17NE	4325	27 Sept 95	1015
OiDell Reservoir	T06S R44E S9SE	?	20 July 95	1120
Unnamed Pond, N of Cow Creek Reservoir	T06S R45E S08SE	4150	24 May 95	1215
Paget Spring #4*	T06S R45E S09SE	3930	24 May 95	1040
Cow Creek Reservoir	T06S R45E S17SE	3850	26 May 95	0930
Unnamed Pond, 0.3 mi. S of Cow Creek Road	T06S R45E S22SE	3560	26 May 95	1700
Slope above Cow Creek, N of spring*	T06S R45E S23SE	3540	27 Sept 95	1154
Mud Turtle Reservoir	T06S R47E S28SE	3940	21 July 95	1350
Round Cow Reservoir	T07S R44E S14SE	3850	20 July 95	1540
Slough Grass Reservoir	T07S R47E S03NW	4060	21 July 95	1235

\*Sites with no herps found during survey

Appendix 2. Sites surveyed during 1995 amphibian and reptile surveys (cont.).

Site	Location	Elevation	Date	Start Time
<b>CUSTER NATIONAL FOREST - ASHLAND DISTRICT</b>				
Road Reservoir	T07S R47E S09SW	3900	04 June 95	1325
Road Reservoir	T07S R47E S09SW	3900	21 July 95	0920
Rocky Crossing Reservoir	T07S R47E S09NE,10NW	3970	21 July 95	1045
Unnamed Reservoir, along Bloom Creek Road	T07S R47E S14SE	3910	21 July 95	0955
Taylor Creek Reservoir No. 1	T07S R47E S15SW	3920	27 Sept 95	1305
Taylor Creek Reservoir No. 2	T07S R47E S15SE	3965	04 June 95	1200
Rim above Willie Bull Prong, N side*	T07S R48E S07SE	3800	27 Sept 95	1500

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\*Sites with no herps found during survey

**APPENDIX 3.**

**AMPHIBIANS AND REPTILES**

**OBSERVED DURING SURVEYS OF THE**

**ASHLAND DISTRICT OF THE**

**CUSTER NATIONAL FOREST**

**IN 1995**

Appendix 3. Amphibians and reptiles observed during surveys of the Ashland District of the Custer National Forest in 1995.

Site	Person Hrs:min	Total number of adults/juv of each species observed			RAPI	CRPI	THEL
		AMTI	BUWO	PSTR			

CUSTER NATIONAL FOREST - ASHLAND DISTRICT							
Road Creek Reservoir	0:40		3*	1			
Unnamed Res., E. Otter Cr.	0:20				7	2	
Unnamed Pond, F.S. Road 775	0:40	*		2*			
Smith Reservoir	0:25	*	*				1
Unnamed Res., River Front Rd.	0:25	*					
Drop Tube Reservoir	0:32					15	
Howard Reservoir	0:15	*					
Fifteenmile Creek, Road 784	0:10		50*				
Blacks Ponds (Reservoir)	0:50		*			9	
Unnamed Pond, Road 802	0:12	*					
OiDell Reservoir	0:32	*				15	
Unnamed Pond, Cow Cr. Res.	0:15			4			
Cow Creek Reservoir	0:40		4	4+			
Unnamed Pond, Cow Cr.	0:15		*				
Mud Turtle Reservoir	0:15				1	5	
Round Cow Reservoir	0:20	*				4	
Slough Grass Reservoir	0:30	*			200+	4	1
Road Reservoir (4 June)	0:20			3*			
Road Reservoir (21 July)	0:10	*					
Rocky Crossing Reservoir	0:45				15+	7	
Unnamed Res., Bloom Cr. Rd.	0:17	*				2	
Taylor Creek Reservoir No. 1	0:35	*			3	14	
Taylor Creek Reservoir No. 2	0:50	*		1*			

\*denotes site with breeding, i.e. tadpoles, larvae, or eggs present

<sup>1</sup>AMTI=*Ambystoma tigrinum*, BUWO=*Bufo woodhousei*, PSTR=*Pseudacris triseriata*, RAPI=*Rana pipiens*, CHPI=*Chrysemys picta*, THEL=*Thamnophis elegans*

**APPENDIX 4.**

**AMPHIBIANS AND REPTILES**

**REPORTED FROM IN AND AROUND THE**

**ASHLAND DISTRICT OF THE**

**CUSTER NATIONAL FOREST**



Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**TIGER SALAMANDER**

Powder River	.5 to 5 mil	/ /1978	No	Observation
Coal Creek Mine, ca. 10 mi. E. of Ashland				
Powder River	< .5 mile.	7/22/1995	Yes	Observation
Smith Reservoir				
Powder River	< .5 mile.	7/22/1995	Yes	Observation
Howard Reservoir				
Powder River	< .5 mile.	7/21/1995	Yes	Observation
Slough Grass Reservoir				
Powder River	< .5 mile.	7/21/1995	Yes	Observation
Roadside reservoir 0.4 mi SE of Bloom Cr Res #1 & 0.4 mi N of Hazel Res				
Powder River	< .5 mile.	6/ 1/1995	Yes	Museum Specimen
Stock pond along FS RD 775, 0.5 mi. N. of Wilber Creek				
Powder River	< .5 mile.	6/ 4/1995	Yes	Museum Specimen
Taylor Creek Reservoir #2				
Powder River	< .5 mile.	7/21/1995	Yes	Observation
Road Reservoir				
Powder River	< .5 mile.	9/27/1995	No	
Taylor Creek Reservoir No. 1				
Powder River	.5 to 5 mil	7/14/1978	No	Museum Specimen
Necessity Reservoir				
Rosebud	.5 to 5 mil	/ /1981	No	Observation
Montco wildlife study area, E. of river				
Rosebud	< .5 mile.	7/23/1995	Yes	Observation
Stock Reservoir along river from road, 2 mi. E. of Birney				
Rosebud	< .5 mile.	7/20/1995	Yes	Observation
Round Cow Reservoir				
Rosebud	< .5 mile.	7/20/1995	Yes	Observation
OiDell Reservoir, ca. 1 mi. NE of Poker Jim Lookout				
Rosebud	< .5 mile.	7/20/1995	Yes	Museum Specimen
Stock pond NW of FS RD 802 (1 mi. NE of OiDell Reservoir)				

Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**GREAT PLAINS TOAD**

Rosebud Ashland	> 10 miles.	6/29/1916	No	Museum Specimen
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**WOODHOUSE'S TOAD**

Powder River Moorhead	5 to 10 mil	6/25/1916	No	Museum Specimen
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Powder River 25 miles SW of Ashland on Otter Creek	.5 to 5 mil	6/28/1916	No	Museum Specimen
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Powder River 15 miles SW of Ashland on Otter Creek	.5 to 5 mil	6/28/1916	No	Museum Specimen
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Powder River Coal Creek Mine, ca. 10 mi. E. of Ashland	.5 to 5 mil	/ /1978	No	Observation
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Powder River Otter Creek	> 10 miles.	6/28/1916	No	Museum Specimen
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Powder River 1 and 2 mi. W. of Fort Howes R.S.	.5 to 5 mil	7/ 1/1947	No	Museum Specimen
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Powder River Road Creek Reservoir	< .5 mile.	7/23/1995	Yes	Museum Specimen
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Powder River Smith Reservoir	< .5 mile.	7/22/1995	Yes	Observation
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Powder River Fifteenmile Creek, where FS RD 784 crosses creek	< .5 mile.	7/22/1995	Yes	Museum Specimen
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Powder River Stock pond off Cow Creek (0.3 mi. S. of Cow Creek Road)	< .5 mile.	5/26/1995	Yes	Museum Specimen
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Powder River Cow Creek Reservoir (at Cow Creek Campground)	< .5 mile.	5/26/1995	No	Observation
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Powder River Stock pond on ridge top, ca. 0.5 mi. W. of West Fork Spring	< .5 mile.	6/ 1/1995	No	Observation
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Powder River Logging Creek Spring, N. of HWY 212, ca. 1 mi. (near Camps Pass)	< .5 mile.	5/26/1995	Yes	Museum Specimen
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Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**WOODHOUSE'S TOAD** (continued)

Powder River	< .5 mile.	7/22/1995	No	Observation
3 mi. N. of Fort Howes, on road				
Powder River	< .5 mile.	7/22/1995	No	Observation
5 mi. N. of Fort Howes on road				
Powder River	.5 to 5 mil	8/1/1974	No	Museum Specimen
Cow Creek Campground				
Rosebud	> 10 miles.	6/30/1916	No	Museum Specimen
10 miles west of Ashland				
Rosebud	.5 to 5 mil	6/30/1916	No	Museum Specimen
Ashland				
Rosebud	.5 to 5 mil	6/6/1991	No	Museum Specimen
Ashland Area, roadside pond				
Rosebud	.5 to 5 mil	/ /1985	No	Observation
Montco wildlife study area, E. of river				
Rosebud	.5 to 5 mil	6/28/1916	No	Museum Specimen
15 mi. SW of Ashland, Otter Creek				
Rosebud	< .5 mile.	7/20/1995	Yes	Museum Specimen
Blacks Ponds				

**WESTERN CHORUS FROG**

Big Horn	.5 to 5 mil	5/12/1951	No	Museum Specimen
Hanging Woman Creek, O.W. Ranch near Decker				
Powder River	.5 to 5 mil	/ /1978	No	Observation
Coal Creek Mine, ca. 10 mi. E. of Ashland				
Powder River	< .5 mile.	5/26/1995	No	Observation
Cow Creek Reservoir (at Cow Creek Campground)				
Powder River	< .5 mile.	6/1/1995	No	Observation
Road Creek Reservoir, ca. 1.5 mi. NW of Holiday Springs Campground				
Powder River	< .5 mile.	6/1/1995	Yes	Museum Specimen
Stock pond along FS RD 775, 0.5 mi. N. of Wilber Creek				

Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**WESTERN CHORUS FROG** (continued)

Powder River	< .5 mile.	6/4/1995	Yes	Museum Specimen Taylor Creek Reservoir #2
Powder River	< .5 mile.	6/4/1995	Yes	Museum Specimen Road Reservoir
Powder River	< .5 mile.	6/1/1995	No	Observation W. Fork Spring, ca. 1 mi. NE of Coal Creek Mine
Powder River	< .5 mile.	6/1/1995	No	Observation E. Fk Otter Cr Rd, at Basin Cr crossing, ca 4.5 mi from jct with HWY 212
Powder River	< .5 mile.	5/25/1995	No	Observation Willie Bull prong of Bloom Creek
Powder River	< .5 mile.	5/26/1995	No	Observation Cow Creek, 500 m. below spring
Powder River	< .5 mile.	7/21/1995	No	Museum Specimen Roadside puddle, 0.4 mi. W. of jct of FS RDs 127 & 790
Powder River	< .5 mile.	7/21/1995	No	Observation Roadside seep, N. side Fifteenmile Creek Road, opposite reservoir on S side
Powder River	< .5 mile.	7/8/1995	No	Observation Swale E. of Yager Butte
Powder River	< .5 mile.	5/24/1995	No	Observation Stock pond ca. 1.25 mi. N. of Cow Creek Reservoir
Rosebud	.5 to 5 mil	/ /1985	No	Observation Montco wildlife study area, E. of river
Rosebud	< .5 mile.	6/4/1995	No	Observation Pond by road edge, ca. 2.2 mi. NE of turnoff to Birney

**NORTHERN LEOPARD FROG**

Powder River	> 10 miles.	6/27/1916	No	Museum Specimen Indian Creek
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Natural Heritage Program      01/09/1996  
Montana Animal Atlas (Herpetile)  
Species Report

County	Precision	Date	Breed	Data Type
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**NORTHERN LEOPARD FROG** (continued)

Powder River	.5 to 5 mil	8/8/1966	No	Specimen Reported
27 mi. W. of Broadus				

Powder River	> 10 miles.	7/11/1957	Yes	Museum Specimen
Otter Creek				

Powder River	.5 to 5 mil	/ /1978	No	Observation
Coal Creek Mine, ca. 10 mi. E. of Ashland				

Powder River	.5 to 5 mil	6/13/1940	No	Specimen Reported
5 mi. W & 1.5 mi. S Fort Howes Ranger Station				

Powder River	.5 to 5 mil	6/26/1947	No	Specimen Reported
2 miles west of Fort Howes Ranger Station				

Powder River	.5 to 5 mil	6/12/1940	No	Specimen Reported
4 miles west of Fort Howes Ranger Station				

Powder River	< .5 mile.	7/23/1995	No	Observation
Pond/reservoir on E. Fork Otter Creek				

Powder River	< .5 mile.	7/21/1995	No	Observation
Mud Turtle Reservoir				

Powder River	< .5 mile.	7/21/1995	Yes	Museum Specimen
Slough Grass Reservoir				

Powder River	< .5 mile.	7/21/1995	No	Observation
Rocky Crossing Reservoir				

Powder River	< .5 mile.	6/4/1995	No	Observation
Otter Cr. where FS RD 94 (Fifteenmile Creek Rd.) crosses				

Powder River	< .5 mile.	9/27/1995	No	Observation
Taylor Creek Reservoir No. 1				

Powder River	.5 to 5 mil	8/1/1974	Yes	Museum Specimen
Cow Creek Reservoir				

Powder River	.5 to 5 mil	7/14/1978	No	Museum Specimen
Necessity Reservoir				



Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**NORTHERN LEOPARD FROG** (continued)

Rosebud      > 10 miles. 6/28/1916 No    Museum Specimen  
 15 miles SW of Ashland, Otter Creek

Rosebud      .5 to 5 mil / /1985 No    Observation  
 Montco wildlife study area, E. of river

Rosebud      < .5 mile. 7/20/1995 No    Observation  
 Ca 2 mi S of Birney, where main N S rd crosses Hanging Woman Creek

**PAINTED TURTLE**

Powder River    .5 to 5 mil 6/13/1940 No    Museum Specimen  
 Horse Creek, 5 mi. W> and 0.5 mi. S of Fort Howes Rnager Station

Powder River    < .5 mile. 7/23/1995 No    Observation  
 Pond/reservoir on E. Fork Otter Creek

Powder River    < .5 mile. 7/22/1995 No    Observation  
 Drop Tube Reservoir

Powder River    < .5 mile. 7/21/1995 No    Observation  
 Mud Turtle Reservoir

Powder River    < .5 mile. 7/21/1995 No    Observation  
 Slough Grass Reservoir

Powder River    < .5 mile. 7/21/1995 No    Observation  
 Rocky Crossing Reservoir

Powder River    < .5 mile. 7/21/1995 No    Observation  
 Roadside reservoir 0.4 mi SE of Bloom Cr Res #1 & 0.4 mi N of Hazel Res

Powder River    < .5 mile. 7/21/1995 No    Observation  
 Taylor Creek Reservoir #2

Powder River    < .5 mile. 7/21/1995 No    Observation  
 Stock pond, N. side of Fifteenmile Creek Road

Powder River    < .5 mile. 7/22/1995 No    Observation  
 Pond near Fifteenmile Creek

Powder River    < .5 mile. 7/22/1995 No    Observation  
 Large pond/reservoir on Tenmile Creek

Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**PAINTED TURTLE** (continued)

Powder River	< .5 mile.	7/20/1995	No	Observation
Otter Creek, at bridge ca. 2.5 mi. N. where road splits				
Powder River	< .5 mile.	7/21/1995	No	Observation
Otter Creek, where Taylor Cr. Rd. crosses, ca. 1 mi. SE of Fort Howes				
Powder River	< .5 mile.	9/27/1995	No	Observation
Taylor Creek Reservoir No. 1				
Rosebud	.5 to 5 mil	/ / 1985	No	Observation
Montco wildlife study area, E. of river				
Rosebud	< .5 mile.	7/20/1995	No	Observation
Round Cow Reservoir				
Rosebud	< .5 mile.	7/20/1995	No	Observation
O'Dell Reservoir, ca. 1 mi. NE of Poker Jim Lookout				
Rosebud	< .5 mile.	7/20/1995	No	Observation
Blacks Ponds				
Rosebud	< .5 mile.	7/23/1995	No	Observation
Otter Creek, 0.5 mi. SE of Ashland				
Rosebud	< .5 mile.	7/20/1995	No	Observation
Pond filled by Parrish Spring along FS RD 95				
Rosebud	< .5 mile.	7/20/1995	No	Observation
Stock pond on S. side of road just beyond cattle guard on private property				
Rosebud	< .5 mile.	7/20/1995	No	Observation
Timber Creek Reservoir, W. side of FS RD 801, 2.5 mi. SW of Poker Jim Butte				
Rosebud	< .5 mile.	7/20/1995	No	Observation
Woodbury Reservoir				
Rosebud	< .5 mile.	9/27/1995	No	Observation
Blacks Pond				

**SNAPPING TURTLE**

Powder River	5 to 10 mil	/ / 0	No	Specimen Reported
See map in Black, 1970				

Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**SNAPPING TURTLE** (continued)

Powder River    < .5 mile.    7/11/1957    No    Museum Specimen  
 Otter Creek

Powder River    .5 to 5 mil    7/3/1947    No    Museum Specimen  
 2 mi. W. of Fort Howes Ranger Station

Powder River    < .5 mile.    7/22/1995    No    Observation  
 Otter Creek, where Fifteenmile Creek road crosses

Rosebud        .5 to 5 mil    9/2/1979    Yes    Museum Specimen  
 Tongue River near Birney

Rosebud        .5 to 5 mil    / /1985    No    Observation  
 Montco wildlife study area, E. of river

Rosebud        < .5 mile.    9/27/1995    No    Observation  
 Poker Jim Butte

Rosebud        .5 to 5 mil    9/2/1979    No    Museum Specimen  
 Tongue River near Birney.

**SPINY SOFTSHELL**

Rosebud        .5 to 5 mil    / /1985    No    Observation  
 Montco wildlife study area, E. of river

Rosebud        < .5 mile.    7/23/1995    No    Observation  
 Tongue River, where Tongue River Rd. crosses, near Brandenburg

**SAGEBRUSH LIZARD**

Powder River    5 to 10 mil    6/25/1916    No    Museum Specimen  
 Moorhead

Powder River    .5 to 5 mil    7/10/1963    Yes    Museum Specimen  
 Otter Creek, 25 mi. SE of Ashland

Powder River    .5 to 5 mil    / /1978    No    Observation  
 Coal Creek Mine, ca. 10 mi. E. of Ashland

Powder River    .5 to 5 mil    / / 0    No    Specimen Reported  
 Within 1 to 2 mi. of Fort Howes Ranger Station, 3900 4200 ft

Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
<hr style="border-top: 1px dashed black;"/>				

**SAGEBRUSH LIZARD** (continued)

Powder River    .5 to 5 mil   7/ 1/1947   No   Museum Specimen  
                          1 mi. N. Fort Howes Ranger Station

Powder River    .5 to 5 mil   7/ 2/1947   No   Museum Specimen  
                          1 mi. W. Fort Howes Ranger Station

Rosebud        .5 to 5 mil   / /1985   No   Observation  
                          Montco wildlife study area, E. of river

Rosebud        < .5 mile.   7/20/1995   No   Observation  
                          Outcrop above FS RD 801 to NW, 3650 ft

**RACER**

Powder River    .5 to 5 mil   / /1978   No   Observation  
                          Coal Creek Mine, ca. 10 mi. E. of Ashland

Powder River    .5 to 5 mil   6/12/1940   No   Museum Specimen  
                          4 mi. W. of Fort Howes Ranger Station

Powder River    < .5 mile.   7/23/1995   No   Observation  
                          Beaver Creek Road, near Beaver Creek

Powder River    < .5 mile.   7/23/1995   No   Observation  
                          Beaver Creek Road, along J.O. Creek

Powder River    < .5 mile.   6/ 1/1995   No   Observation  
                          E. Fork Otter Creek Rd, ca. 3 mi. from intersection w/ HWY 212

Powder River    < .5 mile.   6/ 1/1995   No   Observation  
                          E. Fork Otter Creek Rd, ca. 6.5 mi. from intersection w/ HWY 212

Powder River    < .5 mile.   6/ 4/1995   No   Observation  
                          Otter Creek Rd., 2.5 mi. S. of Fort Howes Ranger Station

Powder River    < .5 mile.   6/ 4/1995   No   Museum Specimen  
                          Taylor Creek Rd., 1.8 mi. E. of intersection w/N. Fk. Taylor Creek

Powder River    < .5 mile.   6/ 1/1995   No   Observation  
                          E. Fork Otter Creek Rd., 0.6 mi. E. of FS RD 775

Powder River    < .5 mile.   7/22/1995   No   Observation  
                          On Cow Creek Road, ca. 0.4 mi. E. of Cow Creek Campground

Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**RACER** (continued)

Powder River	< .5 mile.	9/27/1995	No	Observation
E. Fork Otter Creek Road				
Powder River	< .5 mile.	9/27/1995	No	Observation
Cow Creek road, ca. 1.5 mi. E. of Cow Creek Campground				
Powder River	< .5 mile.	9/27/1995	No	
Taylor Creek Road, 2 mi. E. of Otter Creek				
Powder River	< .5 mile.	9/27/1995	No	Observation
On road at Taylor Creek Reservoir No. 2.				
Powder River	< .5 mile.	9/27/1995	No	Observation
On Otter Creek Rd., ca. 3.5 mi. N. of Fort Howes				
Powder River	< .5 mile.	7/9/1995	No	Observation
SE of Yager Butte				
Rosebud	.5 to 5 mil	6/30/1916	No	Museum Specimen
Ashland, 10 mi W of				
Rosebud	.5 to 5 mil	5/29/1976	No	Museum Specimen
N. of Ashland				
Rosebud	.5 to 5 mil	/ /1985	No	Observation
Montco wildlife study area, E. of river				
Rosebud	< .5 mile.	6/4/1995	No	Observation
Road on E. side of Tongue River, ca. 3.2 mi. NE of turnoff to Birney				
Rosebud	< .5 mile.	7/20/1995	No	Observation
Ca. 50 m below Timber Creek Reservoir				

**PINE OR GOPHER SNAKE**

Powder River	.5 to 5 mil	5/5/1976	No	Museum Specimen
Moorhead				
Powder River	.5 to 5 mil	/ /1978	No	Observation
Coal Creek Mine, ca. 10 mi. E. of Ashland				
Powder River	< .5 mile.	6/1/1995	No	Observation
E. Fork Otter Creek Rd, ca. 4.5 mi. from intersection w/ HWY 212				



Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**PINE OR GOPHER SNAKE** (continued)

Powder River < .5 mile. 5/24/1995 No Observation  
 Gene Creek crossing on Otter Creek Road

Powder River < .5 mile. 6/3/1995 No Observation  
 HWY 212, along Home Cr. ca. 9 mi. E of Red Shale Campground

Powder River < .5 mile. 6/4/1995 No Observation  
 Otter Creek Rd., 0.5 mi. S. of Fort Howes Ranger Station

Powder River < .5 mile. 9/28/1995 No Observation  
 Near Beaver Creek Road, on fork crossing Beaver Creek

Rosebud .5 to 5 mil / /1985 No Observation  
 Montco wildlife study area, E. of river

Rosebud .5 to 5 mil 7/3/1947 No Museum Specimen  
 11 mi. W. of Ashland

**WESTERN TERRESTRIAL GARTER SNAKE**

Powder River .5 to 5 mil 6/28/1916 No Museum Specimen  
 Ashland, 10 mi SW of, Otter Creek

Powder River .5 to 5 mil 6/30/1947 No Museum Specimen  
 2 mi. W. of Fort Howes Ranger Station

Powder River < .5 mile. 7/22/1995 No Observation  
 Smith Reservoir

Powder River < .5 mile. 7/21/1995 No Observation  
 Slough Grass Reservoir

**PLAINS GARTER SNAKE**

Rosebud .5 to 5 mil / /1985 No Observation  
 Montco wildlife study area, E. of river

**WESTERN RATTLESNAKE**

Powder River .5 to 5 mil / /1978 No Observation  
 Coal Creek Mine, ca. 10 mi. E. of Ashland

Natural Heritage Program      01/09/1996  
 Montana Animal Atlas (Herpetile)  
 Species Report

County	Precision	Date	Breed	Data Type
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**WESTERN RATTLESNAKE** (continued)

Powder River   > 10 miles. 6/28/1916 No   Museum Specimen  
 Otter Creek

Powder River   .5 to 5 mil 7/2/1947 No   Museum Specimen  
 2 mi. W. of Fort Howes Ranger Station

Powder River   < .5 mile. 9/27/1995 No   Observation  
 On Otter Creek Rd., ca. 5 mi. S. of Hwy 212

Rosebud   .5 to 5 mil / /1985 No   Observation  
 Montco wildlife study area, E. of river